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ABSTRACT

The nine articles in this collection by members of the American Association of Community and Junior Colleges' Task Force on the Uses of Mass Media for Learning are concerned almost entirely with television, since the telecourse is the medium with which the most experience has been gained and which has the most potential for many community colleges. The individual articles address the following topics: (1) the history of instructional television including a discussion of the necessity of cooperative activities among colleges; (2) consideration of various programming elements for successful development of working relationships with broadcasters; (3) the roles of technology, demographic changes, and heightened awareness of the function of lifelong learning in serving the adult learner's needs; (4) the economics of television-centered courses in terms of acquisition of materials, development of a delivery system, and the delivery of services; (5) college television consortia and their governance, administration, financing, and legal bases, and relationships with broadcasters; (6) telecourse design, development, and evaluation; (7) the role of the faculty in mass media courses; (8) communication with distant learners and time and space factors; and (9) effective community promotion of telecourses. (MB)

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Using Mass Media FOR Learning

Edited by Roger Yarrington

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Introduction

These chapters were written by members of the AACJC Task Force on the Uses of Mass Media for Learning. Although the task force is interested in advancing the use of radio, newspapers, and other mass media for learning, this work is concerned almost entirely with television. The focus is on the telecourse primarily because it is the medium with which we have gained the most experience and which, at this point, seems to offer the most potential for many community colleges and large numbers of learners.

The rationale of the colleges involved, and the task force itself, is this: if the community college truly considers the whole community as its "campus" and all citizens as its clientele, then the use of mass media, especially television, will be increasingly important to the fulfillment of the college's mission.

The task force has been at work for two years. It is made up of community colleges, or consortiums of colleges, that have made major commitments to the production and use of telecourses and other mass media for community education. This book is offered by the task force as a resource to colleges wishing to make greater use of the mass media in offering educational services to their communities.

The book was conceived during the first year of the task force's work when Michael C. Helmantoler was providing staff services. He assisted the task force in outlining the proposed content. James J. Zigerell is now staff director for the task force and has helped to complete the book, as have William A. Harper and Sylvia Forsythe of the AACJC Communications Office.

We appreciate the assistance of the Shell Companies Foundation in making this publication possible.

Roger Yarrington
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Chairman, Task Force on the
Uses of Mass Media for Learning

A Brief Historical Survey

By James J. Zigerell

Like the girl who smokes—or once smoked—Virginia Slims, instructional television has come a long way in higher education. The style of ITV program that today's major community college producers—Coast, Dallas, and Miami-Dade—have accustomed us to is a far cry from the product that appeared on open broadcast when I started my career.

I presented a course in English composition on television as long ago as 1957. The format was uncomplicated. As teacher-host, I did 45 live telecasts from the studio of Chicago's then brand new ETV station (which later became the city's PBS outlet). The studio presentations, kinescoped for later replay, were well rehearsed and carefully prepared. Whatever visual enhancement there was occurred whenever I moved—slowly, of course—to an easel to which was attached a stack of newsprint, on which I wrote with a grease pencil. The student watching at home was armed with a study guide that I had written, as well as a commercially published handbook of English composition and a widely-used collection of readings.

Compare this with the professional video techniques, the well-coached hosts and hostesses, the handsome study materials of one of today's better "telecourses," and you will realize how far instructional broadcasters have come. One is no longer surprised to hear that a program of, say, Coast Community College's "As Man Behaves," a series in introductory psychology, or Dallas' "In Our Image," a fine arts series, draws a larger audience on a PBS station than does network programming.

But the road has been far from smooth. The last 20 years or so have seen instructional television move from early, fairly enthusiastic acceptance in the 1950's, to a period of disenchantment in the '60's, and back to the present stage of renewed acceptance. The present widespread acceptance was prompted, in part, by the spectacular success of Britain's Open University. In addition, the instant success of a children's television series like "Sesame Street" and masterfully-executed adult series such as "Civilisation" and the "Ascent of Man" have demonstrated beyond doubt that the TV medium, intelligently and sensitively handled, can indeed combine instruction and entertainment.

The potential of television for instruction, of course, was recognized from the start. Judith Murphy and Ronald Gross in *Learning by Television*, a 1966 report on the status of ITV issued by the Ford Foundation, declared that despite the failure of certain projects there can be no doubt that "television works as an educational tool." An education writer in *Time*, October 20, 1967, had already concluded that despite resistance from certain quarters, "proof of television's validity shows up in almost every study of its effectiveness." The strength and durability of television as a medium of instruction are only underscored by its survival in the face of gaggles of fast-talking promoters, bands of hostile faculty, and many well-intentioned academic champions who neglected to take advantage of its distinctive presentational properties.

An important UNESCO study published in 1967, *The New Media: Memo to Educational Planners*, listed four educational needs that can be served by ITV. Although the UNESCO compilers were interested in TV as

Above left: Home viewing is the key to success in the use of mass media for education.

Left: A course is taped for TV College, an effort of the City Colleges of Chicago.

a means of attacking the urgent educational needs of developing countries, and were concerned with TV as a system of delivery rather than as a medium with distinctive aesthetic and entertainment properties, what they had to say applies equally well to developed nations. The needs listed are as follows:

1. The need for improving instruction in the classroom;

2. The need to teach those who are and will be teachers of the young and old;

3. The need to increase literacy and the skills of living in an urban technological society;

4. The need to provide extramural extensions of the school and college.

The second need can easily be broadened to help people outside teaching maintain and upgrade skills and knowledge in their occupations and professions—continuing professional and occupational education. Given this extension, it is noteworthy that the four needs are already preeminent concerns of the comprehensive community college.

It is no accident, then, that community colleges are in the forefront of those taking advantage of the instructional potential of television.

The Pioneers

An Associated Press story that brought back many memories for me—and has relevance to this historical sketch—appeared in newspapers while this chapter was being prepared. The report noted the twenty-fifth anniversary of this country's first non-commercial educational TV station, Houston's KUHT-TV. Licensed to the University of Houston and the Houston public schools, the station began its life with a heavy commitment to instruction. Among other things, it can take credit for offering one of the first college courses on television, a course in typing. But now, in the words of the KUHT station manager as reported in the dispatch:

> Education programming still plays a large part in our schedule, but since the late 1960's, the station has been heavily dedicated to the whole community.[1]

This statement has a familiar ring for anyone who has been involved in open-broadcast ITV over the years. Put in less euphemistic terms, it means that KUHT-TV is now a big-city PBS station, and, more public spirited than some of its counterparts, has managed to reserve a block of time during the day for in-school programming. Whatever college-level programming it may still do is shunted off to non-prime times.

Robert D. Carlisle, himself a former educational/instructional producer and administrator, has written a brief and useful history of college-credit TV courses entitled, *College Credit through TV: Old Idea, New Dimensions.*"[2] In a chapter called "The Trail Blazers," he lists the shortcomings of the ITV operations of the 1950's, two of which, CBS' "Sunrise Semester" and Chicago's TV College, still survive. In a later chapter called "The New Breed," he discusses ITV operations and television courses that represent current and significant developments, including the British Open University program and Miami-Dade Community College's precedent-setting "Man and Environment" television course which, indeed, has served as a model for much of the current ITV product.

There is no need to cover the ground already covered by Carlisle. His study is still available. Readers may find this particular chapter of value if it generalizes somewhat broadly on the reasons for the survival or disappearance of the pioneers—"The Trail Blazers."

The news story reporting the silver anniversary of Houston's PBS station suggests a problem that continues to plague ITV producers and users, alike. Unless an instructional producer actually owns and operates a station, as is the case with the Coast Community College District in Southern California, the producer is fortunate, indeed, to find a slot in the broadcast schedule at any time of the day. At times, even within production and broadcast facilities owned by colleges that are themselves major instructional producers, there can be a fierce tug-of-war between those intent on cultivating large viewing audiences in the manner of their Public Broadcasting colleagues and those dedicated to presenting direct instruction to audiences with specialized interests. This lack of suitable air time was one of the factors that brought about the demise of one of the most promising of the early college-credit TV

[1] AP dispatch carried in Baltimore *Sun*, May 23, 1978.

[2] Published by Great Plains National Instructional Television Library, Lincoln, Nebraska 68501.

ventures, the University of the Air of the State University of New York (SUNY). It survived from 1966 until 1971, enrolling about 2000 credit students in eight courses that it broadcast over a statewide network. The network's transmitters, however, were owned by community stations. It was not long before the University of the Air found itself at the mercy of the community stations around the state whenever the question of air time for college courses came up.

Of the pioneers of the '50's, the Chicago TV College and CBS' "Sunrise Semester" are still alive, even though their programs are broadcast at times when only the hardiest and most determined of students can watch. For the first 15 or 16 years of its existence, TV College had both day and evening broadcast schedules on the city's PBS station. In addition, the college leased the facilities of the channel for its own course production.

But the honeymoon was short. In the early 1960's, the TV College evening rebroadcast schedule was shifted to a sister UHF channel that had been awarded the PBS station by the FCC with the understanding that it would serve direct instructional needs and free the original VHF license for cultural and public affairs programming aimed at large audiences. Underpowered and ill maintained, the UHF station's signal was so spotty and unreliable that it soon became unwise for the City Colleges of Chicago to pay the transmission costs for the evening programming. For a brief period thereafter, the PBS station management agreed to lease the TV College enough time on Sunday mornings to repeat broadcasts of the preceding week's daytime programs.

The handwriting had long since been on the wall when the issue finally came to a head, with the PBS station management making it plain that instructional broadcasting was not one of its priorities. To stay alive, TV College contracted for air time on a commercial UHF channel—enough to present four courses early on weekdays and repeat them on Saturdays, starting at 6:30 a.m. TV College course production, of course, had to be suspended since the station was no longer interested in leasing its studio facilities to turn out a product that did not accord with its image. (This proved to be a blessing in disguise, for it forced the City Colleges of Chicago to enter into co-production arrangements with other producers, as will be discussed later.)

The Chicago experience is not an unusual one. But there proved to be a silver lining in the dark cloud. The station management did agree subsequently to recommend to the FCC that the license for its defunct sister station, Channel 20, be transferred to a Chicago-area consortium of colleges, of which TV College is a charter member. One trusts—and hopes—that once a completely rebuilt Channel 20 is on the air sometime before 1980, instructional broadcasters in Chicago will have desirable air schedules at their disposal.

Most of the promising early operations—the New York University of the Air, the Metropolitan Educational Association in New York City (that lasted only from 1957 until 1959), the various short-lived attempts by state broadcasting authorities to offer college courses, including a University of Minnesota project—came croppers for roughly the same reasons. In the days before the ready availability of videotape recordings and players, video courses could not be played at times many people were free to watch. Further, organizations that initially had had access to suitable air time, the New York University of the Air, for example, were unable to provide enough courseware to continue to attract the credentials-minded students who are the mainstays of instructional television and to enable them to make significant progress toward degrees or certificates. Other producers overestimated the size of potential off-campus audiences for credit courses. One must face up to the fact that there simply are not enough people in the states of Maine or Nebraska to sustain open television-based instructional programs year after year.

Despite low budget and "talking face" productions, TV College has survived since 1956, serving close to 200,000 students, while other projects disappeared. The reasons for TV College's survival and the reasons for the failure of others of the pioneer generation should be pondered by any administrator planning to use television in a program of instruction. First of all, the Chicago area, with its six to seven million persons, contains an adequate supply of the mature, able, and highly motivated people who enroll for credit in television courses off campus.

Second, when it accepted the original Ford Foundation grant, TV College committed it-

self to presenting a real alternative to conventional on-campus study. After she had earned the associate in arts degree for several years of study completed entirely on TV, a young wife and mother of three children told a Chicago newspaper interviewer that, instead of "being a makeshift alternative, TV College was in fact the best choice" for her. Although only a relatively small number—about 400 in all—ever completed the entire two years exclusively via television in Chicago, between 1956 and 1972, when TV College did have enough air time to make it feasible for a part-time student to finish within a reasonable period of time, many students did complete sequences that satisfied core curriculum requirements. Typically, successful TV College homeviewers transferred into conventional on-campus programs after completing four or five courses via TV.

Finally, Chicago officials soon recognized that the size of the potential home-viewing audience can fluctuate greatly from term to term. Above all, in Chicago, at least, time must be allowed to elapse between presentations of the same course if enrollments are to be kept stable. A course in psychology, for example, may enroll 600 credit students when offered one semester. Presented again the following semester, or even the one after that, it may attract only half as many homeviewing students. The New York University of the Air, as suggested above, suffered from the need to offer the same set of courses too often.

Off-campus non-traditional students do not seem to turn up in predictable numbers, as do students on campuses.

A Second Generation

We are now seeing a second generation of ITV practitioners in U.S. postsecondary education. Chicago's TV College and the CBS "Sunrise Semester" have managed to bridge the gap between generations. The latter, however, valuable as it is and much as it has enriched the lives of people all over the nation, remains marginal, for it provides discrete courses rather than articulated programs.

In 1969, a reporter for the *London Times* interviewed the author of this chapter shortly after a one-day visit to TV College by the Minister of Education of the then ruling British Labor Party, Jenny Lee, who is largely responsible for the British Open University. Miss Lee and other OU planners saw in the Chicago TV College a scaled-down model of what they had in mind on a national basis for Great Britain. In an article in which she reviewed the status of television in American higher education, the reporter noted perceptively that in this country television was providing "some important fringe education," but "by failure of commitment and imagination from the top, America's educational needs and television's potential have barely been brought together."

The Open University provides a genuine alternative to British traditional higher education and displays "commitment and imagination from the top." Although only about 20 percent of its instruction is delivered on television (and only a small proportion on radio), OU appeared at a time when instructional television in this country was in the doldrums. Suddenly, the skies seemed brighter to the somewhat disheartened champions of the electronic media in higher education. The excitement surrounding the immediate and stunning success of the Open University was felt in Western Europe and the United States. In this country, its success sparked a rebirth of interest in television as a vehicle of instruction and as a distinctive medium of instruction. Other reasons for the changes in attitude were summed up as follows in a report published by Chicago's TV College in 1974:

> ... the recommendations of several influential studies of higher education, commissioned by both governmental and private agencies, have stimulated demands throughout the country for unconventional programs to serve both the adult denied higher education in his youth and the college-aged student impatient with the lockstep of traditional college study. Series like "Sesame Street," "The Electric Company," and "Civilisation" have proved that television is indeed capable of presenting a new kind of instruction to mass audiences—instruction effective in new ways. Suddenly, higher education planners have become aware that the climate of opinion is right, and that the technology is at hand to bring external degree and continuing education programs into the home as well as into off-campus centers.[1]

[1] *Chicago's TV College: A Fifth Report*, City Colleges of Chicago, 1974.

This is not the place to discuss the British Open University in detail, except to say that through a skillful blending of the latest educational technology and old-fashioned elements of correspondence and tutorial instruction, a genuinely new and self-contained higher education system has been created. Anyone interested in the genesis of the Open University, its curriculum, and its place in the British higher education system should read the recently published book, *The Open University*, written by its vice-chancellor, Sir Walter Perry.[4]

There has been much talk—much of it ill-advised and misguided—about establishing U.S. versions of the Open University or adopting its film and printed materials for use by U.S. university extension offices. The University of Mid-America, supported in large part by funding from the federal National Institute of Education, is the most ambitious and well thought out attempt to date to create an American counterpart of the Open University on a regional basis. Unlike the Open University, however, it rests on a thin population base, has a rather marginal relationship to the universities comprising its membership, and, surprisingly, lacks a coherent curriculum and curriculum-making policy. The Open University is a United Kingdom-wide alternative system which developed within a framework of distinctively British political realities, educational needs, and usages. It is grounded in a distinctive and admirable curricular policy revolving around a series of demanding interdisciplinary "foundation" courses that cover the major fields of knowledge and their interrelationships. Starting out with an enrollment of 41,000 in 1971, it now enrolls about 64,000 students throughout the United Kingdom at a limit set by the government.

As suggested above, for purposes of this chapter, the Open University's importance lies in its having rekindled interest in uses of television in U.S. postsecondary education. But before passing on to manifestations of this renewed interest, we should note again that television and radio play only a relatively small part in the Open University system of instruction. In addition, we should also note that OU planners, like their counterparts in American instructional television, have not yet been able to reach the significantly large numbers of citizens who were denied educational opportunity in their youth because of accident of birth or socio-economic deprivation. The bulk of Open University enrollment still remains white collar, made up largely of teachers, technicians, and careerists seeking fuller certification or professional advancement.

The Present Picture at Home

One way to gauge the distance instructional producers have traveled since the '50's is to review the nature and quality of the programming presented over the past 20 years by the Chicago TV College.

Several years ago, when TV College and the local PBS station with which it had been associated for so long had come to a parting of the ways and another broadcast outlet had to be found, it seemed appropriate that a special 30-minute program be produced to launch the new and much curtailed broadcast schedule. The program format was simple: commentary was sandwiched in between samples of TV College programs produced locally or acquired from others over the preceding 17 or 18 years. Interestingly enough, when the program was recorded on videocassette, it formed a capsule history of instructional television production techniques, with the latest of the original TV College products foreshadowing what was to come with the products of second-generation producers—most of whom, it should be noted immediately, are community colleges. The "talking face" teacher was being displaced by a highly visual documentary approach.

In brief, the producers of the 1950's and early 1960's had brought meager resources to their televised "talking face" lecture courses. The present generation of producers know how to produce something beyond a "course on television." They have, indeed, devised a distinctive kind of learning experience, aimed at both the off-campus, non-traditional learner and the student studying on campus. One of the leading practitioners of this approach, Tom Gripp, director of telecourse design at Coast Community College, characterizes a "telecourse" as a new kind of learning experience,

[4]Published by Jossey-Bass, 1977. Another informative—and brief—study is the "British Open University: Media Planned in Context," in *Planning for Higher Education*, volume 4, no. 2 April 1975, published by the Educational Facilities Laboratory, 850 Third Avenue, New York, NY 10022.

and in so doing he distinguishes it from the older TV course:

> [It] is not a correspondence course with pictures; nor is it a televised lecture with supplementary readings. It is an examination and presentation of a body of knowledge and information through the use of sight, sound, color, movement and print in a manner designed to stimulate, motivate, clarify and quantify.[1]

As the TV College special program mentioned above made clear, Chicago-produced courses were TV courses, by and large, rather than telecourses. Fom the '50's through the early '60's, television courses were primarily simulated classroom lecture-demonstrations with as much visual enhancement as always limited resources and a teacher-presenter could allow. One English visitor remarked, with insight that most American critics of TV College lacked, that it was not concerned with prestige, only with quiet, solid usefulness.

Then, too, in the '50's television itself was still a relatively new force in American life and society. The audience for "talking face" courses that led to credentialing and self-improvement was large and seemingly inexhaustible—or so it appeared in the Chicago area. TV College officials, by virtue of their acceptance of the conditions of the original Ford Foundation grant, and without being particularly aware of it, had efficiently tailored their means to their ends. Starting with the premise that there was a home viewing audience large enough to warrant presentation of a range of interrelated courses and sequences of courses, the Chicago community college system used whatever money was available to produce as many TV courses as possible. The courses were the instructional equivalents of parallel courses offered in campus classrooms.

Given this premise, there was no question of devoting an annual budget of $350,000 to the production of a single TV course. Instead, within every school year, four new "talking face" courses were completed in the studio. By offering ten to 12 courses over a school year, TV College was able to keep the costs of televised instruction below, or about the same, as the cost of conventional classroom instruction on a per-credit hour basis. All other uses—e.g., supplementing classroom instruction, serving non-credit viewers—came by way of bonus.

TV College officials and producers, however, soon began to try to capitalize on the properties of the medium itself, particularly its potential for bringing the outside world into the direct instructional process. Marshall McLuhan, the flamboyant prophet of the mass-media age, had made everyone well aware that television was creating an insatiable appetite for experience in depth. No longer is it enough for a Spanish teacher to stand before a blackboard in a television studio and point to verb paradigms. Students are so accustomed to the multi-sensory message of television that they expect scenes to be fully rendered: an actual exchange in a doctor's office, a job interview, a shopping expedition to a boutique or a supermarket—all conducted in fluent Spanish.

Thus, the face of a teacher began to disappear from TV courses. His or her place was taken by a host, who, in a course in "Personnel Management" or "Principles of Marketing" interviews experts from the "real" world in the TV studio or on location, or who, in a course in "Child Development," comments upon film segments, originally produced or acquired from other sources, that illustrate aspects of child behavior.

A next step, which the Chicago TV College was able to take only rarely—and then in short series in "Art Appreciation" and "Consumer Economics"—was to do an entire course in a documentary style. Miami-Dade Community College's highly successful and widely distributed telecourse, "Man and Environment," set the tone for telecourse production in the early 1970's. In addition, as indicated earlier, productions like the Children's Workshop's "Sesame Street" and "The Electric Company," as well as the BBC's "Civilisation," helped launch a new era of instructional television use.

The teacher-host has not disappeared, nor will he or she ever disappear. But there is very little room left for the talking face course anymore, even in the few schools left where large captive audiences still exist for lectures on closed-circuit television.

The Telecourse Today

Once video techniques in ITV courses had

[1] For a discussion of the "telecourse," see Luskin, B., and J. Zigerell, "Community College in Forefront of Telecourse Development," *Community and Junior College Journal*, March 1978, pp. 8 ff.

been refined and brought up to commercial standards, and once it became evident that audiences were both entertained and instructed by "Civilisation" and the "Ascent of Man," the total design of the course presented on television was systematized. With the disappearance, or the reduced visibility, of a teacher who is firmly in charge, the essential functions of summarizing, synthesizing, and prescribing for the student were transferred to packages of supportive materials.

Support packages for a student studying via TV can be elaborate. Some producers—the University of Mid-America, for example—besides supplying study guides and textbooks, make use of weekly lectures reprinted in local newspapers; others—Miami-Dade, for example—even employ the computer as a tutor. The basic means of student support, however, is always a printed study guide, which nowadays is a much more sophisticated instrument than the often casual syllabi that accompanied TV courses of the '50's and '60's. A telecourse study guide produced at present by Dallas, Coast, or Northern Virginia community colleges complements the design of the accompanying video programs. The study guide states precise learning objectives, prescribes activities, and provides tests and exercises that help a student check on his progress and attain the learning goals.

The format and layout of a telecourse study guide are no longer amateurish affairs. Some study guides are produced by commercial publishing houses. Such is the case, for example, with Coast Community College's new child development telecourse, "The Growing Years," or Northern Virginia's "Art America," with study guides and textbooks, published by the McGraw-Hill Company, which reserves the right to distribute filmed versions of the video-taped lessons.

A few telecourse producers publish textbooks on their own. This is the practice in the British Open University, which maintains a large educational technology unit that even distributes its publications through regular trade channels in Britain. The recently established ACCESS Corporation, made up of Central Piedmont Community College, the City Colleges of Chicago, Coast Community College District, Lane Community College in Oregon, and the Metropolitan Community Colleges of Kansas City, Missouri, has produced four video courses, each comprised of 30 half-hour slide/sound programs and a text/study guide published by the Cambridge Book Company. Most producers, however, like most classroom teachers, still rely on textbooks produced by others, selecting a single text to accompany a telecourse, or keying a telecourse study guide to several standard texts in a field so as to give an outside college leasing the telecourse an option.

But the pioneer producers of television courses recognized, as do the new generation of community college producers, the University of Mid-America and the British Open University, that there is no substitute for the human interaction encouraged by tutorial and counseling sessions. It is difficult to imagine a "distant" learner, to use a currently chic term, completing a four-year college course exclusively via television, radio, or independent study. Ideas, concepts, interpretations, principles must be shared and glanced off other minds.

Community college producers, in particular, find it necessary to build even more opportunities for direct face-to-face activities into their systems, since, with increasing frequency, they aim their telecourses at two distinct audiences: one made up of mature adults watching television in their homes and studying on their own; the other made up of students enrolled in television and on-campus courses concurrently. The latter group requires much more support. What investigation in Chicago proved conclusively in the late '60's still holds:

> . . . unselected students of regular college age watching TV courses on campus cannot match the performance either of at-home viewers or conventional classroom students unless they are supplied supplemental classroom instruction.[6]

There appeared in 1970 a special report on instructional technology commissioned by the White House and published by the U.S. Government Printing Office under the title, *To Improve Learning*. This valuable study argued that a systematic and comprehensive approach is the key to the contribution technology can

[6]See *Chicago's TV College: A Fifth Report*, pp. 21-22. The carefully controlled studies that led to this conclusion were reported originally in *Final Report of a Three Year Experiment*, Chicago Junior College, 1959. This report is now out of print.

make to the advancement of education. Such an approach is increasingly evident in the telecourses now available for use by colleges all over the country.

Some Implications

Telecourse production and telecourse use seem to be in a growth period. Judging from recent publicity given telecourses in higher education in periodicals as diverse as *TV Guide*, *The Chronicle of Higher Education*, and *Newsweek*, one is tempted to conclude that a boom is in the making. The numbers of students who have enrolled for credit in PBS series like the "Ascent of Man" and "Classic Theater," converted into three credit-hour college courses by the addition of textbooks and study guides, are encouraging staunch optimists to hope for the coming of the long-awaited learning society.

Noteworthy, too, is the fact that community colleges are among the most aggressive and imaginative of the educational agencies either producing telecourses on their own or converting high-quality public and commercial broadcast series into telecourses. One sign that the telecourse has become the special property of the public community college is the recent establishment by the American Association of Community and Junior Colleges (AACJC) of a Task Force on the Uses of Mass Media for Learning, under whose auspices this book has been prepared. The Task Force, which now numbers some eleven or twelve institutions or consortiums as full members, as one of its first efforts published an up-to-date catalog of telecourses available for use by colleges and universities.

An impressive listing, the catalog contains over 100 courses completed or in progress. Most are telecourses; a few are radio courses. The producers include state ETV authorities, individual two-year colleges or universities, and consortia like the Southern California Consortium of Community Colleges, the University of Mid-America, and the ACCESS Corporation. The telecourses range from series in adult literacy and basic coping skills through the humanities, the social and natural sciences, and a variety of vocational/occupational fields. About 30 of the courses listed can be presented by any institution as the equivalent of three credit-hour college courses with only a minimum of adaptation and modification. Others are still in development and are not ready for widespread use, either containing too few video programs to satisfy faculty and accrediting agencies as they now stand, or containing so many programs in excess of the standard thirty that open-air scheduling would be clumsy. The catalog, too, in its present state makes no direct representations as to the quality of a telecourse, although the reputation of some of the producers constitutes a sufficient guarantee of quality.

The immediate availability of some 30 courses is an encouraging note. But the fact is that the lack of a range of high-quality telecourses is still a real problem and will remain so until the major producers agree upon an inventory of telecourses large enough to allow students on and off campus to make progress toward satisfying common curriculum requirements and diverse enough to attract credit students term after term. There is much to be learned from the survival of Chicago's TV College, which, in its unspectacular way, has managed to keep enrollments of off-campus students at a satisfactory level by rotating core courses and high-demand electives at not too frequent intervals.

It is also encouraging to see community college producers engaging more and more in cooperative production activities. This is one way to develop a library of telecourses that, as a whole, will provide off-campus students with a first-rate, balanced program of studies. Another purpose, of course, is to provide a collection of materials that will capture and hold the attention of an intellectually curious general audience. After all, community colleges exist to serve entire communities and a variety of needs.

As indicated earlier, it is unrealistic to expect that an equivalent of the British Open University will ever appear in this country.[7] Given the strong tradition of local autonomy in American higher education, a genuinely alternative system, based on television to some degree, must come at the state or regional level, if it is to come at all. With the notable exception of the Empire State University in New York which has no regular television service, but allows its students to complete certificates and degrees by submitting a variety

[7] See Zigerell, J., "The Trouble with Open Learning . . .," *Public Telecommunications Review*, August 1974.

of non-traditional learning experiences for college credit, most state universities and systems seem reluctant to develop meaningful unconventional alternatives. Their normal reflex is to consign a set of fragmented non-traditional study opportunities to extension divisions.

The term "fragmented" in the preceding sentence underscores what remains a major problem for institutions now employing television to extend their services to students who cannot study on campus. If students are to be given more than a mere token option to traditional study, articulated sequences of courses must be developed for them. Surveys conducted by Chicago's TV College and Coast Community College, among others, show that television for students other than those who combine TV courses with their classes on campuses—that is, for the so-called "add-on" audience that a college normally does not reach—is a point of entry to regular on-campus programs. As noted above, for example, the mature off-campus TV student typically may complete from three to five courses on television before he or she turns up in a college classroom. (The reader should note once more: only about 400 students, of whom the large majority have been inmates of prisons, have completed the entire two-year program via TV in Chicago.) All these students are drawn to television courses that either satisfy specific curriculum requirements or are highly recommended electives in popular curricula.

The informed observer must conclude that a still unresolved problem at the otherwise well designed University of Mid-America (UMA) is that its telecourses have been produced thus far on an *ad hoc* basis, rather than on the basis of a predetermined curricular rationale. A recent UMA study recognizes that community college ITV producers have produced materials with the curriculum demands of students in mind. For one thing, TV course enrollments reflect the goals of the community college student body: people interested in obtaining college credit from a degree-granting institution (even a two-year degree) while being able to continue established home and work situations.[8]

Leading community college producers have already begun serious discussions of a library of telecourses that will embody a broad two-year college program. (There is also strong concern about wasteful duplication and overlapping of effort in telecourse production.) Some of the courses in the library will be the equivalent of the required and highly recommended courses common to most two-year curricula; others will be electives in non-ephemeral subject areas that are in student demand; still others will be in high-demand introductory career areas. An increasingly important function of the AACJC Task Force on the Uses of Mass Media, particularly as it works with colleges and college consortia interested in using but not producing telecourses, will be to encourage regional and other cooperative uses of such a library. The Task Force will also facilitate and coordinate cooperative production planning for the purpose of developing and maintaining a balanced library of telecourses useful to any college.

The Necessity of Cooperative Activities

The availability of a well-balanced library of telecourses can only benefit the college searching for new and extended constituencies. An increase in inter-institutional and interagency cooperation can only encourage more uses of courses, and can only strengthen the status of television as a vehicle of instruction.

Few colleges can absorb the costs or adjust to the long periods of time required to produce a telecourse like Coast's "Dimensions in Culture." Colleges that have done so—e.g., Northern Virginia Community College with its "Art America," Coast with "The Growing Years," Dallas with "In Our Own Image"—must of necessity look for national markets and establish marketing units to recover costs through leasing courses to others. Certain community colleges are now beginning to collaborate among themselves and with state agencies. Some are even forming organized consortia for joint telecourse use and production. To take only one example of inter-college cooperation: Dallas, Chicago, Tarrant, and Coast community colleges are now producing a telecourse in political science ("American Government"). Dallas, which maintains a full production and instructional design staff, will serve as the production—and distribution—agency. Each of the other cooperating colleges has contributed a

[8]Pages 18-19, *Report of the University of Mid-America Office of Marketing and Information Survey of Institutions Offering Television Courses*, University of Mid-America, P.O. Box 82006, Lincoln, Nebraska 68501.

sum of money and assigned a teacher to the course content team as its share of production costs. The colleges involved represent a student body of almost a quarter of a million. Revenues from outside users will be shared on a pro rata basis and used for further production activities.

The City Colleges of Chicago and the Maryland Center for Public Broadcasting, a state-supported agency, recently completed a well received telecourse in world geography, "Of Earth and Man," and have co-productions in introductory philosophy and art history underway. The Maryland Center has a fully-staffed and well-equipped production house at its disposal.

The Southern California Consortium for Community College Television in Los Angeles, a group of about 70 colleges, has produced several first-rate telecourses, including a widely acclaimed series on the sociology of the family, "Family Portrait." This consortium, of course, has the inestimable advantage of large membership. As a matter of fact, California, a leader in telecourse production and use, has several operating consortia, among which is the Bay Area TV Consortium in San Francisco, a member of the AACJC Task Force. A number of community colleges in central Florida have also formed an active and flourishing TV consortium. Bergen Community College of New Jersey, currently presenting a course in foreign affairs on the CBS Sunrise Semester, spearheaded the formation of a tri-state instructional television consortium of about 35 colleges, with membership constantly expanding.

These by no means exhaust the list. Further mention should be made of both the Maryland College of the Air, a collaborative effort involving the Maryland Center for Public Broadcasting and the state's community colleges, and the University of Mid-America group comprised of the Midwest's "Big Eight" universities. Finally, it should be noted that another major community college consortium, made up of the City Colleges of Chicago and the 15 or so suburban community colleges in the metropolitan area, will undoubtedly form once UHF Channel 20, licensed to the non-profit Chicago Metropolitan Higher Education Council, is beaming a strong signal from the top of the Sears Tower in the city. The station is being constructed with state funds, and, in time, will interconnect with several other instructional channels in the State of Illinois.

As noted earlier, acting out of enlightened self-interest, some community colleges, including Coast, Northern Virginia, Miami-Dade, the five community colleges of the ACCESS Corporation, and commerical publishers have established mutually advantageous working arrangements. The publishers produce free-standing texts and filmed copies of video-tapes that they can market themselves as self-contained items; the college producers reserve the right to distribute programs or telecourses as a whole. The possibilities for cost-recovery are obvious—and colleges producing for national uses must find ways of recovering or sharing costs.

Cost is only one of the concerns of the present generation of telecourse producers. Time is still another. As has been indicated, first-rate telecourses cannot be produced in much under 18 months to two years, with some taking even longer. Unless, and until, two-year college production consortia are operating on a continuing basis, or until there is a steady flow of lower-division telecourses available from organizations like the University of Mid-America and the Maryland Center, telecourse producers and users will have to stay on the *qui vive* for general audience cultural series (which, to the shame of American public broadcasters, usually come from England) that can be converted into credit courses by the addition of supportive materials of the kinds already developed by Miami-Dade and Coast. Not all such series, however, fit into the mold of the required or highly recommended introductory course. Some, the excellent "Nova" series, for example, are made up of discrete units that make credit course conversion extremely difficult. Such courses, however, like the courses that can be based on the complete plays of Shakespeare that the BBC has announced it will be adapting for television broadcast over the next six or seven years, will attract other students who, in the normal course of events, do not come to the community college: the professional man or woman, the college-educated or curious person in search of sustained intellectual and aesthetic stimulation.

Still Unanswered Questions

There is always a danger that advocacy of television in education can degenerate into "promotion." The fact is that there has already been too much of this. In addition, as with the large-scale-closed-circuit uses some years back, the TV medium has been abused. Television was employed on large university campuses as a way of handling multiple section courses, with a glum professor reading his yellowed lecture notes to a camera, while hundreds of semi-comatose students slouched before TV monitors in lecture halls throughout the campus. We can only hope that the false starts—and the inflated claims—are well behind us.

There are still some big questions as yet unanswered. At one meeting of the AACJC Task Force on the Uses of Mass Media, Chancellor Norman Watson of Coast Community College, who has made his college a leader in telecourse production and use, expressed what has long been on the minds of community college officials and others who employ TV extensively as an instructional tool. The first question, one to which AACJC Task Force members are now giving their attention, is how prospective users can be kept aware of tried and proved high-quality telecourses. That is, what criteria of instructional and production design should telecourses meet before they are listed in catalogs?

A second set of questions has already been addressed above, but because of its importance is worthy of further notice. What kinds of informal and formal arrangements will be necessary among producers to insure that the telecourses produced serve the needs of the person willing to take courses for credit? What courses in what subject areas should be developed? What institution or institutions can best undertake what course? What kinds of auxiliary activities are required to guarantee that a student taking a telecourse has an experience that is the equivalent of the experience offered by a parallel course taught in the classroom? These are questions to which AACJC and its Task Force can respond in a significant way.

The third question raised by Chancellor Watson has to do with the ways college producers can work effectively—and appropriately—with one foot in the academic world and the other in the commercial world. How can they take full advantage of the pedagogical and scholarly expertise of the former, and the design, marketing, and distribution expertise of the latter?

One more question continues to badger administrators of ITV projects. Analyses of telecourse credit enrollment figures reveal consistently that the bulk of those who register are taking a TV course for the first time. Only a relative few become "repeaters" on TV. Why is this? And there is a related question of what happens eventually to the off-campus student who takes a telecourse. As happened so often in Chicago's TV College during its first fifteen or sixteen years, do they move into conventional on-campus programs?

In short, is there really a sizable audience of off-campus people willing to enroll in sequences of telecourses semester after semester? Or should televised instruction be viewed rather as a means whereby new students are recruited for conventional study?

Then, too, instructional broadcasters must not allow themselves to become overenamored of open broadcast, glamorous as it is. There are effective ways of using telecourses for both group and independent study on closed circuit—on campuses, in public libraries, in community and retirement centers, in factories and offices. New developments such as the video disc and compressed video systems will open still other avenues of use, encouraging, for example, home and group viewing via cable systems and via inexpensive "black boxes" that will record programs and replay them on the home TV sets to which they are attached.

Nonetheless, open broadcast will remain of great concern to instructional producers. After all, if the figures can be trusted, more American homes have television sets than bathtubs. The country already supports a vast and costly public television network that was established to provide worthwhile alternatives to the fare provided by the commercial broadcasters in the interest of the common good. Soon a public satellite system will make even more programming available.

The sad fact is that not many public broadcasters see formal instruction as a significant part of their missions. Nor have they thus far been particularly concerned with making the task of converting general audience productions into college-level courses any easier for colleges. For example, many col-

leges are eager to accept credit enrollments in the new BBC-produced history of religions, "The Long Search," whenever it is broadcast over the PBS network. Unfortunately, PBS officials, understandably desirous of reaching the largest possible audience for a major production, do not announce broadcast schedules until the last possible moment—until they are aware of the schedules of the commercial networks. Colleges must publicize courses and schedules well in advance if they are to attract students.

Although PBS stations recognized the advantages of doing whatever they can to help colleges within their signal area enroll students in courses based on "The Ascent of Man" or "Classic Theater," when the programs are being aired, as yet they see no particular advantage in bringing colleges into the planning stages of the productions. Such a working arrangement would give colleges sufficient time to produce richer and far more effective study materials to accompany series adapted as college courses.

Certainly the community college, as represented by the AACJC Task Force on the Uses of Mass Media for Learning and other instructional television producers, must take concerted action to induce public broadcasters to recognize that they do indeed have a responsibility toward audiences interested in formal instruction, particularly when the programming is a form of civilized entertainment that a general audience will also watch. Educators and many other citizens find it hard to accept as "educational" the stream of rock-and-roll concerts, hockey games, and soccer matches on some of the nation's PBS stations, particularly since commercial channels carry programming of this kind in superabundance.

There are also broader theoretical questions worthy of continuing investigation. For example, to what kinds of instructional tasks is the TV medium best suited? To the imparting of information? Teaching cognitive skills? Motivating through multi-sensory impact? Supplementing print?

Finally, what kinds of TV production techniques are best suited to the learning styles of mature, motivated viewers? Can the fast-paced "Sesame Street" style, entertaining but aimed at an audience with a short attention span, be adapted for use with both the on-campus students of normal college age now enrolling in telecourses in greater numbers and the older off-campus students looking for a simulated college experience? There is much evidence to suggest that older and more highly motivated students find certain entertainment techniques distracting and obtrusive. For that matter, as indicated earlier, most successful community college producers make extensive use of teacher-hosts, drawn either from faculty ranks or the professional theater.

There is no room for the strong didactic hand or tedious talking face in the telecourse. But there is a need to sum up, interpret, and synthesize for the student. Students feel a need for an authority figure and a guide in the learning process, whether they study in traditional or non-traditional ways.

Television is no longer on the fringe of higher education. It is continuing to prove its usefulness in enriching and extending educational opportunity to those both served and unserved through the traditional channels.

Working with Broadcasters

By Terrence D. Adams

Virtually all of the United States is covered by an elaborate and complex network of television and radio transmitters. Whether these be commercial or noncommercial, the influence they possess, by virtue of the ability to communicate information to nearly all persons in the country, is enormous.

In 30 years commercial television has literally redefined our life styles. In just over 20 years a public television service network has crept across the country. In fewer than 10 years it has been joined by National Public Radio.

Educators have been grappling with the electronic media in an attempt to use it for improving instruction. Until recently, the results have been inconclusive and to some extent disappointing. As a result, radio, with its roots in educational institutions, drifted to general interest programming. Educational television, launched with great fanfare in the early 1950's, has long since gone "public" and redefined itself.

Now we stand on the brink of what must have been the vision of those who tried to use instructional radio and television earlier. The national broadcasting of "The Ascent of Man" in 1975 as a college credit course may have been the turning point. The increased involvement since 1970 by many community colleges in television and radio-based courses should fuel further expansion. As optimistic as this all sounds, however, there is an additional key element: the forming of an enthusiastic team of broadcasters and educators.

Historical Development

In 1926, the National Broadcasting Company started the first regular network with 24 stations, which was followed a year later by the formation of the Columbia Broadcasting System. The period 1927 to 1950 was characterized by continually expanding program format and extent. It was described as "The Golden Age" for commercial radio in the United States. In addition, other networks were formed (MBS, ABC) during this period, and radio programming provided the major source of electronic programming in the United States until the late 1940's, when commercial television was introduced.

Also, just prior to the beginning of World War II, FM (Frequency Modulation) entered the experimental stage, but commercialization of this electronic medium was delayed until the end of the war.

Emerging Educational Radio

The use of radio for educational purposes began in 1919 at the University of Wisconsin when WHA went on the air. By 1925, many of the broadcasting licenses were held by educational institutions, and most of these were in the AM (Amplified Modulation) band which lies between 535 and 1600 kilohertz. However, competitive pressure from commercial stations created after 1925 gradually forced many of the educational stations off the air so that by the time the FCC was created in 1934, only a few AM educational stations remained. This situation continued static until 1941 when FM broadcast was authorized on the 88 to 108 megahertz spectrum.

In 1945, the FCC reserved a portion of the FM band exclusively for educational programming, restricted licensing to agencies and institutions which could provide educational "systems," and allocated low power transmission for experimental broadcast. As a result, a large number of educational radio licenses were

Advanced technology, illustrated by satellite "dish" at KOCE-TV, Calif., means much for colleges.

applied for, and by the mid-fifties over 400 such stations were operating, most with independent, local program formats.[1]

Since many of these local stations were operated by colleges and universities, the type and extent of programming varied extensively. WHA in Madison, Wisconsin, for example, programmed agricultural information for the then largely rural farm population. At other locations attempts were made to utilize the station for instructional purposes with mostly disappointing results. As a result, the program format gradually changed until the mid-sixties when many educational radio stations avoided "instructional" materials and emphasized noncommercial general interest programming. Nonetheless, the period 1945-1970 marked a relatively orderly expansion of "educational" radio programming.

Formation of the NAEB

Much early utilization of radio was developed by educational institutions. In fact, by 1925 over 170 educational radio broadcasting stations were on the air.[2] Common concerns and problems, a need to share programming and technical expertise, and a desire to develop professional contacts led a group of these stations to form the National Association of Educational Broadcasters, headquartered at the University of Illinois at Urbana. This organization began a wire-tape program exchange between member stations—the NAEB Tape Network, later to become the National Educational Radio Network (NERN). This was the forerunner of what eventually evolved into a highly developed interconnecting network for both television (PBS) and radio (NPR). The NAEB was originally created mainly as a professional organization, but as the educational needs of the listening and then the viewing community increased, so did the scope of operations for NAEB. By 1950 NAEB operated separate and distinct programming functions for educational radio and television. In 1960 the national operations moved to Washington, D.C. Thus, the NAEB served as much more than a professional organization for the period 1925-1959. After 1959, however, some of the major distribution and library functions of the NAEB were transferred to newer agencies.

Creation of the FCC

By 1934, it had become evident that some type of regulation would be needed to aid in managing and developing program policies and procedures, primarily in the commercial sector. Furthermore, this would need to be accomplished by a single governmental agency. As a result, after long and occasionally bitter debate, the Communications Act of 1934 was passed which created the Federal Communications Commission (FCC). This agency has regulated all interstate and foreign communication by wire and radio, including telegraph, telephone, and broadcast. The FCC includes in its regulatory sphere many of the day-to-day activities associated with programming format, context and type of program, and engineering rules and regulations.

Essentially, the FCC is concerned with serving public needs and interests. The commission has identified the following elements to be included in commercial programming: (1) opportunity for local self expression; (2) development and use of local talent; (3) programs for children; (4) religious programs; (5) educational programs; (6) public affairs programs; (7) editorialization by licensees; (8) political broadcasts; (9) agricultural programs; (10) news programs; (11) weather and market reports; (12) sports programs; (13) service to minority groups; and (14) entertainment programming.

The FCC does not have censorship authority over either individual stations or networks. It does, however, provide regulations for engineering and programming to the extent that these regulations do not interfere with the right of free speech.

Since 1934, the FCC has made many changes in regulations which apply to both commercial and noncommercial broadcasters. Many of these changes relate to allotment of broadcast frequencies for radio and channels for television signals.

Commercial Television

The period 1925-1940 was characterized by mushrooming radio broadcasting, the development of FM signals, and experimentation with

[1]Gillingham, George. "The ABC's of Radio and Television." *Mass Media and Communication.* (Charles S. Steinberg, Editor.) Hastings House, Publishers. New York: 1966. pp. 243-256.

[2]Barnouw, Erik. *A History of Broadcasting in the United States.* New York: Oxford University Press. Vol. 1, 329 pp. Vol. 2, 391 pp. Vol. 3, 396 pp.

television. Although these experiments with television broadcast continued during the period 1940-1945, the end of World War II marked the beginning of commercial television on a grand scale.

While the concept of broadcasting pictures had been demonstrated as early as the mid-nineteen-twenties, commerical TV had to wait for the technology developed during the war and for television receiver engineering standardization. The period 1947-1950 was marked by a tremendous public interest in television broadcasting, and the three major networks (NBC, ABC, CBS) engaged in heated competition for licenses, programs, and format.

By 1948,the FCC had granted approximately 100 television licenses, and in some areas of the country station signal interference problems had developed. A television license "freeze" was ordered by the FCC for three and one-half years, which left some areas of the country with two or more TV stations and some with none. In 1952, the FCC lifted the freeze, made additional TV channel reservations, and amended some sections of the Communications Act. These actions by the FCC triggered the development of noncommercial television.

Emergence of Educational Television

Prior to the end of the license freeze imposed by the FCC, the commission had determined that a need for noncommercial educational TV stations had been amply demonstrated; that the record showed the desire and ability of education to make a substantial contribution to the use of television; and that to ensure an extensive rather than a sparse and haphazard development of educational television, channels had to be reserved by the commission. As a result, on April 14, 1952, the FCC ordered that channel assignments be made to 242 communities exclusively for noncommercial educational purposes. Of these original assignments, 80 were to VHF (very high frequency) and 162 were to UHF (ultra high frequency).

The first noncommercial educational TV station (KUHT) went on the air at Houston, Texas, in May, 1953.[3] Expansion of the number of educational television stations was sporadic from 1953 to 1959. Lack of program materials, severe budget problems, and equipment limitations prevented growth. However, after 1960 growth occurred more rapidly. Funding by the Ford and Carnegie Foundations provided impetus. Growth was also spurred by President Kennedy's signing of a bill in 1962 which provided for federal aid to noncommercial station facilities if the station could raise 25 percent of the costs. By 1975, the number of stations had increased to 240, with 150 licensees.

Creation of NET

The early to mid-sixties growth of educational television is easily documented. The average number of television broadcast hours each week increased to nearly 50. With the advent of videotape, it became possible to share programming among stations.

As early as 1954, public station managers realized that an alternative central source other than the NAEB for collection and distribution of programming would be needed. As a result, in that year, the Educational Television and Radio Center was established at Ann Arbor, Michigan. Subsequently, the center began to assume some of the distribution and library functions formerly handled by the NAEB. After a few years this function was transferred almost exclusively to the ETRC.

In 1959, the center received a grant from the Ford Foundation and moved to New York. In the process, the name changed to National Educational Television (NET) and through the early sixties, with considerable Ford support, the service expanded to include a National Instructional Television Library. However, by the mid- to late 1960's the relationship between NET and its station affiliates began to deteriorate when serious dissension developed over programming philosophy, centralized control, definition of role, and the apparent indifferent independence of NET toward member affiliates.[4] This marked the beginning of waning influence and control of NET over the station affiliates, and by 1970 NET had been incorporated into WNET, a production and broadcast facility at New York City. Today, WNET produces considerable and significant programming for the Corporation for Public Broadcasting.

[3]Gillingham, George. Loc. Cit. pp. 253-54.

[4]Katzman, Nathan. *Program Decisions in Public Television: A Report for the CPB/NCES Programming Project.* NAEB. Washington, D.C.: 1976. p. 4.

Development of CPB

In 1964, the National Association of Educational Broadcasters (NAEB) convened a conference of station managers to ponder the problems of continued financing of the public stations system and emerging difficulties with NET. Carnegie Corporation, U.S. Department of Health, Education and Welfare, and the office of the President became interested in the recommendations of this NAEB conference, i.e., to "study ways and means by which educational (broadcasting) can become a permanent instrumentality in the United States." It was also recommended that a private commission be created to investigate these "ways and means" and the Carnegie Commission on Educational Television was formed. In January, 1967, this commission's report was published, entitled *Public Television – A Program for Action*, wherein a number of specific proposals were made, including:

1. There should be combined federal, state, and local efforts to improve facilities, provide support for individual stations, and increase the number of educational stations.

2. Congress should establish a federally chartered corporation to receive and disburse government and private funds to improve programming.

3. The Department of HEW should be given funds to improve station facilities, expand the coverage system, and encourage instructional programming.

4. Federal, state, local, and private agencies should support the development of television as a tool for formal and informal education.

After a few significant amendments, the proposal was developed as a bill and enacted as the *Public Broadcasting Act of 1967*. The federally-chartered corporation which was recommended emerged as the Corporation for Public Broadcasting (CPB), its functions to include the following:

1. Support at least two national production centers, deal with independent producers, support production by local stations of programs for more-than-local use, and support strictly local programming.

2. Provide facilities for live interconnection of stations.

3. Support research and development of improved programming.

4. Provide the means to recruit and train talented television artists and technicians.

Significantly, the CPB was created for both public radio and public television and its effect was to mark the beginning of the end of the control of NET over affiliates and to establish a funding, policy making, and management system for public broadcasting.

Creation of PBS

An amendment to the *Public Broadcasting Act of 1967* designated that the CPB could not directly own or operate an interconnection system to facilitate public television. Thus, the corporation developed an organization to operate this interconnect and, as a result, the Public Broadcasting Service (PBS) was created.

The PBS is a member organization of the nation's public television stations. Owned and governed by the stations, it serves both as the national distributor of public television programs and as the coordinator of numerous station services. The service provides other specialized services to member stations, including lobbying activities. The PBS is funded through two sources: member affiliates and the Corporation for Public Broadcasting. The CPB provides a major portion of PBS funding and, therefore, has considerable influence over (1) pilot program production and selection; (2) community service grants (CSG); and (3) so-called repackaged materials.

The PBS is not a producing agency but contracts with other agencies or institutions to develop program materials. Also, the service contracts with AT&T for maintenance and installation of lines for the network interconnection.

Formation of NPR

In March, 1970, the Corporation for Public Broadcasting provided the financial assistance to allow 90 previously established noncommercial radio stations to form a national network for public radio. This network, National Public Radio (NPR), began broadcasting on May 3, 1971. Since then, more stations have been added to the network, numbering 211 as of March, 1978.

CPB has defined NPR as "a private nonprofit corporation created by the nation's public radio stations to serve them. As a production center with studios in Washington, D.C., NPR distributes informational and cultural programming to those stations daily.

It also serves as the stations' representative voice to the public, Congress, federal agencies, and other public broadcasting organizations. Funds for the operation of NPR are provided primarily by the Corporation for Public Broadcasting."

As with public television, public radio programming differs in its service from one station or community to another. Licensees of public radio stations include public and private schools, state agencies, community groups, private foundations, municipalities, and religious groups. At present, approximately 750 noncommercial stations operate in the United States, and while these stations must operate in the public interest, the licensee's interests often play a major role in determining the actual program content.

In May, 1977, NPR merged with the Association of Public Radio Stations (APRS), thereby creating a single national public radio entity. This entity also functions as part of the Public Broadcasting Service and the Corporation for Public Broadcasting in the United States.

Educational Programming

There has been much discussion and debate about what comprises educational radio or television. Historically, it is a term often used to differentiate between non-commercial and commercial broadcasting. However, this general definition does not always hold. In the early development of educational radio it included an almost endless variety of programming, from religious rallies to corn crop forecasts. Special interest groups included some programming which, even with imagination, could not be called educational. In the case of educational television, programming embraced less variety but often was unable to provide the programming combination to capture viewer interest.

Describing the early educational television scene, Erik Barnouw summarizes, "In 1956 only two dozen non-commercial stations maintained a struggling existence. Some showed promise and vigor, WGBH-TV, Boston; KQED, San Francisco; WQED, Pittsburgh. At most stations, survival depended on arrangements with schools or boards of education, whereby selected courses were taught by television."[5]

Also, early attempts to utilize commercial television for educational purposes were less than spectacular. Programming attempts such as "Sunrise Semester" and other broadcasts on commercial stations met with undesirable on-the-air time allocation, lack of coordination between the stations and educational institutions, and generally apathetic audience response. During this period many public television stations provided K-12 instructional programming during daylight hours and either went black in the evening or programmed a series of travelogues or school board meetings. It was, for many public broadcasters, a rather stark period of development and Barnouw further comments ". . . scarcely a beacon light for non-commercial television."[6]

The utilization of educational radio and television by colleges and universities during the same period provided little leadership. Although many educational institutions maintained radio stations on campus, only a few invested money in television. Often the medium was used to broadcast lectures and the "talking teacher in front of the gray flannel drape" emerged as the model for many educational television ventures.

Meanwhile, many campus radio stations became sounding boards for the student body or dropped into obscurity as a physics department plaything.

It seems no small wonder that as the mid-to-late sixties arrived and brought the CPB, PBS, NPR, and the interconnection, many public broadcasters began to breathe easy for the first time. Educational programming was partially re-defined as public interest material and the newly identified instructional television and radio (ITV and IR) materials were shifted, eliminated, and modified to accommodate the new public television programming.

Elizabeth Young summarizes the current status: "Public radio is just entering its adolescence after a long childhood when it was under-nourished and virtually ignored by many."[7] Despite occasional documentation of the success of radio-based instruction, such as reported by WBAA (Purdue University), the

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[5]Barnouw, Erik. *A History of Broadcasting in the United States*. New York: Oxford University Press. Vol. III, p. 72.

[6]Barnouw, Erik. Loc. Cit. Vol. III, p. 72.

[7]Young, Elizabeth L. "Public Radio in Education: An Overview," *Patterns of Performance: Public Broadcasting and Education 1974-1976*. (Compiled by Robert D. B. Carlisle). Washington, D.C.: Corporation for Public Broadcasting, 1978. p. 103.

medium has failed to "catch on" after more than 50 years of use.

In summary, for many broadcasters, the instructional television and radio experience has not been good, and often for good reasons. These past experiences with ITV and IR continue to pervade the thinking of many managers and it shows on many public station program logs. As a result, many agencies and institutions have encountered a reticence on the part of public broadcasters to allot high priority to the production and/or airing of any material which falls into the general category of instructional television or instructional radio.

Programming Policies

Both public and commercial broadcasters wish to respond to what they perceive to be the listening or viewing interests of their audiences. For commercial stations, this is a matter of existence since the revenues generated by selling audiences to advertisers pay the stations' bills. On the other hand, for public media, audience development and maintenance becomes somewhat more personal inasmuch as funding comes directly or indirectly from the public through taxes, foundations, grants, auctions, and the like.

Since both commercial and non-commercial broadcasters are audience oriented, general programming policies for both are quite similar. Briefly, these can be summarized as follows:

1. The station's programming is an attempt to broadcast material which management perceives to be in the community interest.

2. Programming balance is maintained by selection of materials from as wide a variety as possible, consistent with audience interests.

3. Programming is developed to be consistent with FCC rules and regulations or other applicable regulations or guidelines.

4. Programming is always a station management prerogative.

The difference in programming between public and commercial broadcasters is delineated by the fact that public broadcasters often classify all of their product as "community interest." Commercial broadcasters, on the other hand, need to sift through their products and classify some as public or community service, some news, political, and so on. This is to conform to the FCC rules for licensing or re-licensing.

Another important difference is that the commercial broadcaster must place a dollar value on air time and sell this time to advertisers. Thus, programming in this case is quite a sensitive task since effective revenue-drawing advertising is a necessity. Public broadcasters need not be so sensitive to the dollar value of air time, other than its status as a fixed cost in overhead. This fixed cost is included in the total price charged for air time, however.

Broadcasters sell air time to all potential users and the user must make over-all comparison of cost both between competing commercial stations and between commercial and non-commercial stations. Comparison of specific programming policies for commercial and non-commercial broadcasters illustrates how programming philosophy differs between the two.

Commercial Broadcasters:

1. Management will program to take the best advantage of the sale of air time to advertisers.

2. Broadcast time provided without charge, i.e., community or public service, will be programmed at management's discretion.

3. The cost to the user of air-time varies over the span of the broadcast day and programming policies will reflect this cost variation.

4. Regardless of cost of air time, management normally will not program materials inconsistent with the individual station's operating philosophy.

Non-Commercial Broadcasters:

1. Programs will be developed that are timely, interpretive, investigative, on current affairs, ideas, and the arts.

2. Programs will include public events and issues, cultural enrichment or information, and special programs which meet specific needs.

3. Programs will also emphasize adult education, public school instruction, and learning for children.

Working with Broadcasters

The potential user of the broadcast media, whether it be public or private, for instructional purposes needs to take a number of programming elements into consideration when developing working relationships with broadcasters.

Consideration of the following may aid in selection of media or program philosophy.

First, are the media easily and clearly accessible to the listener or viewer? Using an FM radio station with only enough power to cover half of the potential audience is questionable. Also, when using television, consideration of the benefits of UHF to VHF transmission should be included. In some areas of the country, UHF signals are weak or the audience is not "UHF familiar." The cost of air time on UHF is generally lower, but the cost savings may be lost if the audience is not there.

Secondly, what is the programming philosophy of the station? Will the material be delivered at a time/cost combination to reach the intended audience?

Research has shown that broadcast media-based instructional material is most effective if aired when people are home normally, i.e., early morning, late afternoon, late evening. Also, a repeat of the program later in the day or the next day considerably enhances the program's use.

Thirdly, often the final programming developed will be the result of considerable negotiation between the broadcaster and representatives of the institution or agency. It is usually unrealistic to believe that a television/radio station will program instructional materials in "prime time." An exception to this may be a nationally broadcast program, such as "The Ascent of Man" or "Roots," for which instructional packages have been successfully utilized by local community colleges in the past. In any case, be prepared to establish with the broadcaster that the audience is significant and worthy of effective program service. Careful development or selection of instructional support materials will help this effort.

Fourthly, can alternate delivery systems, such as cable TV or satellite communications, be utilized? In many communities the local cable franchise holder must supply at least one channel for little or no cost to an educational institution or agency. Cable often provides a greater selection of program times and days. This is especially true if the material is broadcast on an "educational channel."

Lastly, has a system been developed to accurately determine the results of programming? As noted earlier, every broadcast manager wants to believe that he/she has a "feel" for the station's audience. Developing a variety of methods for accomplishing this, i.e., surveys, student completion rates, ascertaining casual audience, and other methods may help convince the broadcaster that television and radio-based instructional programming is working.

The introduction to this chapter identifies a need for enthusiastic teamwork between broadcasters and educators. This chapter was written with the thought that a knowledge of the historical background of the electronic media coupled with an understanding of how broadcast programming is developed will help shape that team. As community college educators and local station personnel expand their course offerings, and as the audiences grow, more information will be added. Meanwhile, we can look forward with anticipation to the linking of community college educators and local broadcasters.

Serving the Adult Learner

By Bernard J. Luskin

The forces of technology, demographic changes, and a heightened awareness of the role of lifelong learning will make a significant impact on our world. These three seemingly unrelated thrusts are converging, and it is time to examine them and their potential impact.

Until the 1970's, the pattern was for television courses largely to transplant traditional classroom procedures to the screen. Courses were not designed as complete learning systems. There was little invention or innovation. This, coupled with inexperience, bureaucracy, and unrest, thrust us into the 1970's with television still struggling to find its place in higher education—despite the fact that in the two previous decades television had transformed the habits of post-World War II America.

Some specific history is useful here to enhance the proper perspective. As early as 1932, the State University of Iowa experimental station WGXK began to broadcast educational programs—probably the first anywhere. By 1948, several other universities were experimenting with television, including the University of Michigan and American University in Washington, D.C. In 1952, the FCC set aside 242 television channels for educational purposes. Moreover, colleges had been given time on commercial stations for educational service.

The Ford Foundation-supported Fund for the Advancement of Education made numerous grants to institutions for educational television. At its peak, the Ford program involved 200,000 students in 800 schools. Out of this experience came the conclusion that the results were poor unless the programs and materials were of high quality. Generally, the results were poor.

Chicago City College was one visible success of the early years. What the Chicago experiment proved was that a program could be successful. The Chicago experience aroused great interest and was observed by many concerned with the potential of television for learning. The numerous experiments of the 1950's and 1960's demonstrated what could be done but did not achieve significant broad scale results. The famous Schramm studies are classic in reporting a consistent stream of positive outcomes.

The early obstacles to effective uses of media in education were formidable. These included newness, cost, the traditional notions about education, lack of personnel with sufficient component skills, negative attitudes of faculty, lack of incentive, poor documentation of developments, a communication gap between educators and people in the television industry, expense of development, inability of institutions to share software, poor distribution mechanisms, confusing copyright laws, attitudes of administrators, lack of sophistication of students, and poor understanding of the skills required to develop and offer television courses. In addition, the early state of development of telecommunications devices precluded comfortable and convenient access. All these were elements inhibiting a dramatic early success for television as an integrated force in higher education, especially in adult learning.

If, however, we accept the premise that these early limitations were not due to the medium and that television, computers, and other artifacts are now developed significantly and are integrated within the concept of telecommunications, then we must take an up-dated look. Now, with changed attitudes, results, and technical developments, we have entered a new era.

Host Edwin C. Krupp is shown on the set of Coast Community College District's "Project: Universe."

The potential of television in postsecondary education is emerging from the fog.

Some specific incidents of the last five years are illuminating. The British Open University was chartered in 1969 and became operational in 1971. The Open University was conceived as the "University of the Air," although the program uses a variety of techniques. The Open University system offers integrated learning systems which include print materials, study centers, tutors, and television. We in America have watched the British experiment with high interest and, simultaneously, forces in American postsecondary education have renewed attention to the potential of television.

We are seeing the evolution of two basic types of television courses. First, courses *from* television, courses designed around various sets of programs produced as a series—primarily for entertainment or cultural interest; and, second, courses *for* television, courses designed from the ground up as educational offerings and where the use of the various video programs is but one equal partner in a system designed for learning.

National courses from television: The first effort to create a course around a series was done with the BBC-produced "Ascent of Man." The University of California, San Diego (UCSD) and Miami-Dade Community College teamed up in developing materials and assisting the colleges with encouraging results. This was followed by "Classic Theatre: The Humanities in Drama," "The Adams Chronicles," and "The Age of Uncertainty," which were efforts of UCSD and the Coast Community College District in California. "Roots" was also coordinated as a course by Miami-Dade. More than 500 colleges and 600,000 students have participated in these courses.

Syndicated courses for television: A variety of institutions have been cooperating in the development of broadcast courses. We have seen such courses as "The Growing Years," a course in child development, created from scratch as an instructional system with the cooperation of McGraw-Hill, the Coast Community College District, and UCSD.

In 1972, a report presented by Arthur D. Little indicated that there were only three quality telecourses worthy of broadcast into the colleges of the nation. Today, as a result of the cooperative efforts of a variety of institutions, there are more than 30 courses being used in a regular way by more than 300 colleges. In 1969, there was only the occasional college that broadcast courses for credit. In 1978, the use of broadcast courses amounts to "business as usual" in a large number of colleges.

The Future

It seems clear that technology will have a "revolutionary" effect on the society of the future. This is especially clear in light of the singular impact of television on our society. As we apply new technical developments to education, we must broaden our perspective in order that we may direct rather than merely predict the future. We must go beyond education, television, computers and other artifacts.

What are the potentials? First, the nature of the media must be examined. The medium is the message is an oft-quoted point made by media philosopher Marshall McLuhan. The medium is not only the message, however. Consider:

1. The medium is the message.
2. The medium is the massage.
3. The message is the message.

Consider the synergistic impact of technology and knowledge:

1. *The medium is the message:* Access, convenience, form, and fabric make the point. In 1948, isolated film crews with clumsy equipment depicted events, developed and transported their recordings, and eventually we saw pictures of what we had already read about in the newspaper, had heard on the radio, or had had said to us through the talking head reading news from a prompter over black and white television. Today, we stand with a "news interpreter" as we see a war, a birth, a fire, or a murder. This generation is attuned to immediacy and multisensory response. The picture is not enough. We must read and we must listen. The word "media" is plural and so are our learning capacities and so is telecommunications. The diversity of the media itself is also its own message for us to receive.

2. *The medium is the massage:* Tremendous varieties of learning artifacts, such as books, study guides, i.e., new ways of writing, new ways of reading, and personal interaction, are all media to which we are attuned. So, if in daily living we must complete our experiences through a variety of means, why not in learning? Life and learning are synonomous for

those who are alive. Certainly, as institutions purport responsibility to help people learn, the case is for diversity of learning systems and diverse access. Simplify the path to learning and more people will follow it.

3. *The message is the message:* Knowledge is portable and we learn in a variety of ways. The intensity of response to the immediacy of the Vietnam conflict—a conflict brought into the homes of the American public without the buffer of time and print—is illustrative. It is one thing for a general to say "War is Hell," and altogether another thing to put that message in "living" color into the comfortable living rooms in the homes of America. The current technological capability of our media has grown, and the focus of the message has been sharpened.

The Xerox machine has revolutionized printing. Printing has helped free up knowledge. Television has revolutionized the habits of the nation. Why, then, has television not revolutionized education? Why have computers not revolutionized education? There are reasons, among them the lag of society behind technology. But, telecommunications technology has moved us so fast that answers to the questions of "why haven't . . ." only serve to delay understanding. And, these questions are dwarfed in a future of instant access, condensed storage, two-way communications, data transmission, and new knowledge of how people learn.

Power: A Propelling Force in Education

Power, energy, the expansion of its creation, and the efficient use of it to do more with less have given us vast new capability. All that existed until 1800 was manual power. We then developed mechanical power followed by electronics coupled to form electromechanical power and advanced uses of electricity. Now dramatic uses of nuclear power connected with new forms of circuitry bring vast changes in everything from automobiles to spaceships and satellites. In circuitry, the power frugal transistor replaces banks of power-hungry vacuum tubes. Miles of wiring are replaced by printed circuits, or "chips," and computing time is reduced from hours to milliseconds.

We now have the network capacity to move, to know, to see, and to do in ways we never had before—new capacities to act and to think. The repercussions resulting from the interactions, the synergism of their combinations, portend a future society which demands advanced sophistication. We have the capability to reach entire nations and their peoples with a message simultaneously and instantly as satellites rotate the earth in stationary orbit. Overall, communications technology—learning technology—is advancing to a level never known and perhaps never imagined before. As communication equals knowledge transference, then technology has made us even more aware that knowledge is portable.

Demographic Change

Our population is changing. We are a nation growing more slowly and growing slowly older. Life spans are expanding. By the turn of the century, for the first time in the history of the world, the median age of a major nation will be 35. Two groups of individuals are increasing more than 50 percent—adults between 35 and 50, and adults over 65.

The aspirations of these groups differ from those of years past. And, these aspirations portend important changes in our society. A pebble thrown into a pool will cause a rippling effect. The changes we are considering are not pebbles. They are rocks and the waves will be felt throughout our nation as the stones crash into the water. Nationwide we have experienced a rural to urban shift. There is some evidence that the shift is changing somewhat in some places, but projections from the National Science Foundation have been that within 25 years, 85 percent of the population will settle in 12 population centers throughout the nation and on the coasts. The prediction is that 85 percent of the population will probably live on 20 percent of the land space unless there are changes. Research shows that "quality of life" and movement relate to activities important to one's lifestyle, the opportunity for advancement, ability to go to schools, and access to services. If each of us listed 10 characteristics comprising our personal index for "quality of life," six or seven would probably be identical. Education and learning would make the list of most indexes.

Education and learning are the ladders of upward mobility—one of the aspirations of today's society. *Time* magazine recently featured a story on the "New Elite," young married couples in which both adults pursue dynamic and high-paying careers. The article

noted a fundamental difference in the outlook of these couples, who see themselves not as "us" but as "me and me."

The "new elite" are illustrative, but by no means offer the sole example. Throughout the economic spectrum, separate careers for the familiar partners is an occurrence of significant consequence for education. The entry of women into the work force, the care and education of children, the development of second and third careers, the availability of avocational free time, and the increasing sophistication required of society will change our future.

School and learning no longer exist in a vacuum, if they ever did in all but the attitudes of the educational establishment. As we approach the 21st century, we face a civilization more complex than any previously imagined. We are now clearly a post-industrial society. Learning is becoming an aspect of that society. Education throughout life is no longer a luxury. It is a necessity—and even retirement is not an unskilled occupation.

Lifelong Learning

Learning is a way of helping people to stay vital as long as they live. Lifelong learning offers growth, stability, and enrichment to each of us in working, in coping, and in living.

Learning for coping: With dramatic changes taking place in society, forcing adults to continue making choices between complex and controversial alternatives, this necessity becomes obvious.

Learning for living: We must have education for living. With the advent of earlier retirement, shorter working hours, broader interests, communications, and travel, it is clear that education and learning opportunities are important for vital living.

Learning for work: Education for work is a societal imperative. Professional, technical and managerial jobs of all types are now much more knowledge-based than ever before. Increased occupational obsolescence necessitates continuous retraining and upgrading. Just as Alice in "Through the Looking Glass" found that she had to run as fast as she could to stay in the same place, today's society is such that education is needed that people might "run faster" and progress. We must deal with the question of careers and careers within given occupations. The average adult now changes jobs seven times and changes careers three times in a lifetime. A career is a sequence of events which constitute one's life and the life of one's family. Continuing career education is one of society's most effective forms of unemployment insurance. It is a means by which society can deal with its people by plowing back a payoff.

Lifelong learning: Lifelong learning offers hope. Clearly, an education terminated at 18 or 24 is no longer sufficient for a person at age 50. Learning throughout life offers hope to all of us and keeps us from becoming mired in stagnant circumstances. Learning needs of the unemployed, the underemployed, the unhappily employed, the handicapped or isolated, and persons interested in enrichment offer great opportunities.

Here are some more facts about the educational environment of today. In 1975, the census bureau estimated there were almost 120 million Americans age 25 or older, 56 percent of the United States population—nine million more in that category in 1975 than in 1970. And, within that category, an increased percentage are involving themselves in post-secondary education.

Adult learners may be homebound, including the physically handicapped and those restricted by actual or perceived responsibility. They are the aged or retired. They are persons who had to stop out of college in order to raise a family or pursue career goals, and who now want to complete a degree or to simply take courses and learn. They are persons who never attended college and now—10 to 20 years later—wish to do so. They are those who left college in order to work or to serve in the Armed Forces and now desire to return in order to obtain a degree. They are workers previously barred from higher education for economic and occupational reasons. They are those whose work schedules vary erratically or periodically, such as police officers and firemen. They are persons who lack transportation. They are persons too isolated geographically to obtain reasonable "in camera" access to institutions of higher education. They are currently enrolled college students who could benefit from additional learning opportunities. They are those barred either sociologically or psychologically through unemployment, family, or peer group pressure, or simply those who naturally gravitate to diverse forms of learning access. In summary, the adult learner is split

in many ways by age, sex, race, ethnic group, have's/have not's, excluded/included — and most are part-time students.

Life is a learning process with each person as different as his or her respective fingerprints — even more so since fingerprints don't change and people do. *Passages* clearly shows a person is a different person through each decade of life. Medical science tells us that a person age 30 doesn't have a single cell which has not been replaced since age 20.

Equalitarianism as an educational philosophy forces the conclusion that there is no universal student. There may have been under the concepts of the previous two decades, but not now. Each adult learner represents a point on a matrix of characteristics and stage of life. The combination of these affects the needs and desires of each learner.

There are constellations which cluster fields of learning; and we know how to package and make knowledge in these fields available through courses and programs. It is clear, however, that diverse learning opportunities are imperative if we are to provide "equality of opportunity" within any consciousness of "individual needs and desires."

The Capacity Exists

The capacity for access and acceptance exists. The fact that there are more than 270 public television stations and 2,500 two- and four-year colleges across the nation presents an enormous learning network of institutions that may participate actively in adult learning. Acceptance of the media is not a question; by the time a student has graduated from high school, that student has spent 15,000 hours watching television. Research shows television sets are on in the average household six hours and 15 minutes each day. The United States is a nation owning twice as many television sets as bathtubs.

Wide use of quality broadcast courses looms as a major educational and communications breakthrough. Alternative forms of learning and teaching demand a diversified base. Vice President Walter Mondale observed, "Education is no longer the theory of schooling. It is rather the interaction of educational institutions with each other and with the world at large." Unless the future is envisioned within the concept of lifelong learning, and unless the imaginative applications of new technology are developed, then, as Shakespeare said, "We will lose our ventures."

The future of education and the use of media in adult learning are closely bound with the motivation of adult learners. If we fail to recognize this, we will evolve an educational system victimized by paralysis.

The future of educational institutions is now relevant to learners of all ages, and the future is not predetermined. More than that, the future matters. The point is, a false image of the future will destroy the relevance of education. We must be careful not to be obsolete, but more than that, we will be in real trouble if we are anti-adaptive. The future is plural — arrayed with options. We will not progress along smoothly worn grooves. The future portends a clear relationship between new developments in media-based coordinated learning systems and the adult learner.

The trends are clear. First, coordinated learning systems can serve many types of learners; and, second, there is no longer a universal student profile. The point of it all is that there are millions of adults, the media is hot, and we need to find new ways to use it, especially for adult learning.

The Economics of Television Centered Courses

By Robert H. McCabe

The resurgence of television-centered courses is occurring at a time when introduction of new programs in colleges is especially difficult. Since 1968, support for higher education has been declining. At the same time the student body has become increasingly diverse, requiring new methods of instructional delivery. However, at the very time that new approaches appear so necessary, reduced budgets are causing withdrawal to the traditional core of the program.

Budgeting procedures in higher education are, on the whole, rather primitive. There is an expectation of "normal expenditures" and everything else is difficult to introduce or maintain. Unfortunately, many see college programs as comprised of teachers with a piece of chalk, some administrators, and a few custodians serving a student clientele which is comprised of full-time 18 and 19 year-olds with sound academic backgrounds seeking four-year degrees.

The student bodies are not configured in that way, and neither are the delivery services. Almost all faculty use audio-visual materials and specialized print materials. The majority of the students are part-time and over 25, and many are sufficiently motivated to study as distant learners. Growing numbers of students enroll with academic deficiencies and they require additional services to have a fair chance at success. The students vary in motivation, goals, learning rates, learning styles, ages, skills, and time available for study. Variable time, mastery learning, computer-assisted instruction, computer-managed instruction, audio-tutorial programs, and television-centered programs are illustrations of concepts and instructional arrangements to meet the needs of the wide range of individuals who enroll in the colleges. It is clear that a learning program designed for the new student body should be diverse, concerned with individualization, and increasingly utilize the bursting capabilities of communications technology. The new learning programs employ a broad array of personnel, including instructional aides, computer programmers and machine operators, television technicians, laboratory assistants, and many more. With all of the change, budget planners continue to anticipate expenditure patterns from earlier times, and to resist any other. The purchase of a set of films for $2,000 or $3,000 is often debated at length while personnel budgets in the millions elicit little discussion.

These current budget practices make it particularly difficult to introduce or sustain the offering of television-centered courses with their high fixed and low incremental costs, and very different expenditure configuration. If such programs are to survive, great care must be taken to understand the costs and to insure that there is a demonstrable measure of quality and that expenditures per student are maintained at or below those of traditional programs.

The totally polluted world of the future is depicted in this scene from "On the Bus," a segment of "The Art of Being Human," a Miami-Dade Community College television course.

Cost Structure

If institutions view the new costs that will be incurred with television-centered instructional delivery as additions to the "normal expenditure" pattern, there is little to justify participating in such programs. There will be new expenditures that are not incurred in traditional instruction; however, these can be balanced by the reduction of other expenditures. The television-centered courses should result in a reconfiguration of expenditures with the objective of an acceptable cost per student/course.

Those planners who develop television-centered learning programs based on traditional expenditure patterns are probably doomed to failure, for it would be difficult to introduce the required new expenditures, and current institutional economics will not accommodate more expensive delivery systems.

Some institutions have gone into television-centered courses with the expectation of great savings. They believe that the television programs will replace the lectures. This approach will work for a small number of students, but for most a full delivery system is essential. The television programs do not substitute for the work of the faculty member in the lecture/discussion class; they are simply one component of the newly-arranged combination of learning services. Institutions that provide only telecasts and study guides are being unfair to students, and will experience little success. While it should be possible to achieve lower costs per student for television-centered courses, this is dependent on many factors—most importantly enrollment. If enrollments are low, it is more probable that the costs per student will be higher than for traditional instruction. What must be recognized is that in television-centered courses traditional costs are reduced and new costs added.

Three Cost Elements

There are three major categories of cost in television-centered courses: (1) The development or acquisition of instructional materials; (2) the development of a basic delivery system and delivery organization; and (3) the delivery of the instructional services. The first two are fixed costs for traditional instruction. These expenditures must be amortized by spreading them over large numbers of students.

The cost of developing high quality television-centered instructional materials can be very high, and with few exceptions must be recouped by the producing institution not only through use by its own students, but through use by students in other institutions. For most producing institutions, the front-end risk is high and the dependence on national use substantial. If the producing institutions are to continue developing high quality programs, other institutions that use the courses must share in the materials development cost by paying for use of the materials. Currently, fees charged for use of television-centered course materials are generally modest, and since they are frequently based on enrollment, risk is minimized. Thus, the materials acquisition charges can often be amortized effectively with a limited enrollment.

All institutions offering television-centered programs must develop an institutional delivery system. This should include an educational communications system for the distant learner, an administrative communication system (registration, scheduling, etc.), a system for access to the on-campus services that are available to other students or substitute services, an advertising plan, and a communications procedure with television station and on-campus administration. If several courses are to be offered, a complete system must be developed. If only one or two courses are offered, particularly if tied into national broadcasts, a less complex system will suffice. This system is part of the overhead or fixed cost associated with offering television-centered courses.

While the fixed costs for the academic program are higher for television-centered learning, the incremental cost of instruction is lower. The high fixed cost and low incremental costs form a declining cost curve which begins above traditional instruction, and crosses below at a predictable level of enrollment, depending on the individual institution, the course, and the instructional services provided. There are many expenditures that must be incurred to enroll the first student. From that point on, the cost for each additional student should be considerably less than for a student in a traditional format. Traditional program costs are driven principally by instructional salaries. Typically, 90 percent of the direct cost of instruction is for the instructor's salary (including fringe benefits). Although even in traditional courses large enrollments generate some economic advantages (desired class size is easier to maintain), in the main the one-thousandth student added will add approximately the same expenditures as the thirtieth. For television-centered courses this is not the case.

To enroll the first student there is an initial investment in course materials and a delivery system in addition to an instructor, and the planning cost to establish the course. However, the incremental cost for each student is minimal. This is an entirely different economic structure. In traditional instruction the enrollment in any course, beyond some minimum, is not critical. Each enrollment re-

sults in a similar cost, as sections are added or cancelled, based on an expected mean class size. In television-centered programs enrollment is of central concern, as most of the expenditures are committed regardless of enrollment, and each enrollment adds very little cost.

One additional consideration in television-centered learning is that institutional overhead per student is less. Most of the learning activity takes place at home, and the students are simply not available to take advantage of many on-campus services. Wherever possible, the distant learner should have the advantages on-campus students enjoy, but they will not place equal burden on the college. It is obvious that they do not use classrooms and laboratories. These savings in support services and in faculties should not be overlooked when determining the economic feasibility of television-centered programs.

The following table shows a comparison of cost distributions for a typical community college traditional delivery system and a television-centered delivery system for distant learners. The two most important differences are apparent. The traditional program generates a higher institutional support cost, and 90 percent of the remaining costs are in instructional personnel. The television-centered program requires less institutional support and has a more complex distribution of the other costs, including the purchase of instructional materials. Except for the largest television-centered programs, it is difficult to isolate or adjust institutional support costs. It is advisable to try to arrange expenditures so that the combination of materials acquisition and modification, delivery system and delivery of instruction cost no more per student than direct instruction for traditional programs. Cost of registration and advisement and other student services should not be computed in this comparison, as these services are a part of institutional support.

Typical Circumstances

Although circumstances vary for each institution with each course and with enrollment volume, it is helpful to look at typical circumstances for a planning rule of thumb. At this writing, expenditures for direct instruction for traditional instruction in community colleges cluster at $75 to $100 per student for a three-hour semester course. This being the case, the model community college could afford to pay between $22.50 to $40.00 per student for acquisition and modification of materials for a television-centered course. The difference between the cost for materials and goal cost per student is then available for the delivery system and delivery of instruction. The only group of expenditures that will vary with enrollment is in delivery of instruction, and even in this area the variation is minimal unless very substantial enrollment occurs. The picture is clear—high enrollment courses are financially beneficial, low enrollment courses are not.

Comparative Cost Distribution for A Typical Community College Traditional Education And Television-Centered Education

Traditional	*Television-Centered*
Institutional Support—50% ± Plant operations; administration; institutional programs; compliance and reporting; student services; instructional support.	**Institutional Support—35% ±** Plant operations; administration; institutional programs; compliance and reporting; student services; instructional support.
Direct Instruction— 5% ± Instructional Materials 45% ± Instructional Personnel—including salaries and fringe benefits of faculty, instructional aides, etc.	**Instructional Materials Acquisition and Modification—15-20%**
	Delivery System—5-15%
	Delivery of Instruction 15-35% Includes cost of air time and faculty salaries.

Acquisition and Delivery

Colleges with limited offering of television-centered courses, especially if they are dependent on others arranging broadcast time (such as national telecasts), may wish to organize so that none of the delivery costs continue unless courses are being offered. This can best be done by using part-time staff or overload pay for existing staff, and tying in the external student to existing on-campus services. For the growing number of institutions that offer television-centered courses each term, full-time personnel will be required and become a stable expenditure for operation of delivery systems. These expenditures form a part of the overhead for each course.

Although the future appears bright, as of the present, for all but a few institutions television-centered course offerings cannot be predicted very far in the future. They are dependent on what others will develop, what courses will get national or regional broadcast time, and/or negotiations for broadcast time with local television stations.

Each course that is offered will require services of faculty, even if all of the materials have been well developed elsewhere. Faculty course services should be on an ad hoc basis, as each course offered must be supported by faculty with appropriate academic preparation, and course offerings may well change each term. The full-time employment of teaching faculty for television-centered courses will limit offerings to those in which the full-time faculty have competence. Some day there may be sufficient materials available that full curricula can be offered via television-centered courses. It might then be possible to maintain full-time faculty; however, this day seems some years away.

One of the most important economic factors of feasibility for delivering institutions is the source of the television programs. If the program is to be broadcast either nationally or for some other reason in the institution's area, there may be no cost to the delivering institution for the television programs themselves. If that is the case, and, if the institution is willing to use the print materials provided by the developing institution essentially intact, enrollments of as few as 25 to 50 students can be economically feasible. Even in such situations, however, the institution should plan for a simple student communications system. In such cases it may be a direct contact by telephone from an instructor assigned to the course, or written assignments graded and returned.

More often, institutions that wish to provide television-centered education will need to acquire their program by paying for broadcast rights, and they may well wish to purchase a set of video cassettes for use on campus. As these steps are taken, the enrollment necessary for economic feasibility rises quickly. When broadcast rights are acquired, the delivering institution must arrange air time. This takes considerable effort in working with local television stations. In many cases it may require the payment of fees. Often, stations are only willing to provide peripheral hours—those best suited for owls and robins. Then one must decide whether this air time will result in sufficient listenership. Often, the public broadcasting stations require institutions to pay for broadcast time, yet that may be the only alternative. Very high quality video programs with good potential for non-student audiences have a better chance for good air time from public broadcasting stations the first or second time they are aired. After that, acquiring good air time continues to be a struggle. The expenditures for broadcast time are an important part of the overhead for television-centered courses.

Each delivering institution must determine how much of the course materials should be developed in-house. From a financial standpoint, it is clear that this should be as little as possible. The producing institutions are providing substantial support, not only in the television programs, but in texts, student study guides, faculty guides, test banks, and even communications systems. These materials are offered at exceptionally low costs per student, and if they can be used as provided the delivering institution is far ahead. But there is another important consideration. Faculty are engaged in creative activities and most believe that they can do better, that they would give another and more important emphasis, or that there is something they would add. The faculty in each institution wants to put their own stamp on the materials—to "own" some share of the course. They have difficulty accepting someone else's work without modification. Thus, some modifications of material may be desirable for the positive psychological value for the course faculty. On the other hand, one must be careful not to incur unnecessary costs in material modifica-

tion. Fortunately, the producing institutions now are more understanding of the importance of flexibility and the need for the delivering institutions to make modifications. In many cases, materials now are being designed to make it easy to modify and shape the materials to the thinking of those who will be using them.

Obviously, modification should be restricted to the least expensive components. The television programs are by far the most expensive, and one should be very reluctant to add or change video components of a course. In many cases, that option does not exist as the video is being delivered via national or regional broadcasts, or permission for change cannot be obtained. Textbooks are the next most expensive item, and faculty are accustomed to using text material as is. Modifications are made simply by passing up sections or adding other readings. In many cases a different text can be substituted for that which is recommended. There is often high interest on the part of faculty in modifying student guides. The student guides are often easiest to modify and some of the recent versions are designed with ease of modification in mind. It is not unusual for an institution to develop its own study guide.

Currently, the student communications systems are the least transportable and therefore need the most local work. In most cases useful resources are provided in faculty guides developed by the producing institutions. If institutions acquire a basic system such as RSVP, the producing institution's materials can be used as provided, or the delivering institution can simply make individual modification. Since nothing is printed, and thus nothing is final until a student's response is processed, modifications can be made on a week-to-week basis. For the future, this seems an area of rich potential for aiding faculty in modifying programs to their satisfaction.

The bottom line is, of course, the amount of fixed expenditure in planning and development of course materials that the delivering institution is willing to accept. The higher the enrollment, the more students there are for amortizing development costs, and therefore the more latitude the delivering institution has in spending on customization of materials. In determining an acceptable cost for course modifications, institutions should take into account the re-use of the material. If they expect to use the material over several terms or in several formats, this increases the number of students, and either permits a lower development cost per student or a larger customization expenditure. The question is how much an institution can afford in the fixed costs for materials both in acquisition and modification.

Course Production

The question of the importance of production values is central with regard to instructional television programs. There is still no clear answer. The rebirth of television-centered educational programs and the sharing of these materials among institutions has less than a decade of history. Some argue that increased production quality will make such a substantial difference in the number of students served and the number of institutions purchasing the materials that high-quality documentary productions are the best way to proceed. Others feel there is an appropriate middle ground of high quality studio production. There is no doubt that the documentary approach is both expensive and, even more importantly, the development is time consuming. Each institution taking this approach can produce a limited number of courses, and can be successful only if other institutions use the materials, and if they can depend on acquisition from other institutions for some of their own needs. Those institutions opting for studio-type productions can develop more programs, fit their own curriculum needs more closely, and should be less dependent on other institutions' products. Further, sales to other institutions do not need to be as extensive in order to reach a break-even point.

The jury is still out on the question of whether students find the documentary or the high-quality studio-centered program most acceptable. However, it is clear that the "lecture substitute" programs of the early 1960's are no longer acceptable to our visually sophisticated students and that when television is used, its visual capability should be fully exploited. This is what makes it a valuable learning tool. There are things that can be done that cannot be matched in lecture/discussion arrangements.

The question of content and production values necessary to gain air time is another consideration. It seems strange, but few public broadcasting stations show interest in post-secondary educational programs, and in public broadcasting at the national level there is dis-

tinct disinterest. To have sufficient enrollment, programs need to be shown at "good" hours, and in most cases the public broadcasting stations will only make such times available if the programs have outstanding production values and general audience appeal. Should a college go to documentary productions, the chances should be better for wide utilization and for stations providing good broadcast times. However, achieving that goal is a financial imperative. The producing institutions are maneuvering through perilous economic seas at the mercy of the whims of the unconcerned public television establishment.

What should marketing strategy be? Give away or put a low price on broadcast rights and bank on a significant return from the load on items that students purchase? Hold out for large returns from broadcast rights? Give the video materials a broad exposure and bet on cassette sales for the principal return? Build a college sales organization? Combine with other colleges for a single sales organization? Utilize publishers for video and/or print materials distribution? None of these questions has yet been satisfactorily resolved, but some insights are emerging: (1) For many reasons, primarily the illogic of budget procedures, institutions have great difficulty purchasing sets of cassettes for $4,000 or $5,000 a set. Thus, a wide distribution of cassettes requires lower prices, the breaking-up of series into single cassettes, more understanding of necessary costs by using institutions or some combination of these. (2) While institutions have problems with high-dollar purchases of cassettes or broadcast rights, most seem cooperative with regard to charges to individual students for materials. So an income load on materials purchased by students should always be an important consideration in course development. (3) Institutions are more psychologically ready to purchase materials on a per-student charge, as opposed to a flat charge. When possible, broadcast rights should be sold in that way. (4) The future will be different, and video recording much more common and far less expensive. Future planning should keep video record sales in mind and might even consider selling off-air dubbing rights.

The time and expenditure for quality television programming are such that it is doubtful whether any institution can produce sufficient materials to completely supply its own needs. Thus, most institutions must assume that substantial portions of their own needs will be supplied by others. For this reason, it is in the best interests of the producing institutions to cooperate in determining production priorities so that a full range of materials is developed. The colleges must assume that they can conquer the "not developed here" syndrome and can recognize quality and value in materials developed by other institutions. There has been considerable gain over the past two years. Producing institutions are working much more closely together and are communicating with regard to production priorities.

Grant support can alter the economics of any course development and make practical what would be impractical without it. Although the community colleges producing television-centered courses have so far not had great success in attracting grant support, their achievements are establishing a record that should result in more support in the future.

Varied Uses

There is definitely disagreement with regard to planning instructional materials for flexibility. Some feel that a standard package that can be easily used without modification is most acceptable to institutions. This is certainly true in many cases, especially for first-time users of television-centered courses. It is my conviction that in the longer range materials designed to facilitate modification will have the greatest utilization.

If anything has been learned over the last decade with regard to sharing instructional material it is that creative professional people are loath to accept a fully-structured course exactly as it has been developed. They want to implement their own ideas. The brief history of the new instructional video programs shows that others find uses never dreamed of by the developers. Miami-Dade's "Man and Environment" was designed for use as a freshman course, but it was used with different print materials for both secondary school and graduate courses, and the variety of classroom-centered uses staggers the imagination. This faculty creativity is both a frustration and a benefit for the producing institutions. One cannot predict that all of the producing institutions' course components, especially print materials, will be used, and this reduces income. On the other hand, the creative plans of

many faculty increase utilization. In the long haul this special creativity of American college faculty should expand use of materials. The important thing is to develop products with flexibility in mind.

There is no good reason why quality television programs should only be used for external students. If a program is well developed and assists students in learning, it can be used both in independent study and in support of traditional instruction. Faculties use films and video materials in virtually every course, and there should be substantial on-campus use of the video programs developed for external use. Whatever developments the future may hold, at the moment there are far more students taking credit courses on campus than off, and that probably will be the case for many years to come. Therefore, it behooves those developing programs to plan with on-campus use in mind.

The video programs are the most expensive of the course materials and the least flexible. A single version of each program has to be designed to stand as developed. In many cases, programs can be organized to present the principal concepts and for affective impact. A video series developed in this way has the potential for broad utilization. It can support college classes, general audience station broadcasts, adult education (non-credit) classes, high school classes, uses in libraries, and other areas. Further, if the video programs are not interdependent, there are two additional possibilities to increase utilization. First, individual programs can be used separately; thus, the possibility of use by on-campus faculty increases substantially. Second, additional modules can be added to a course, providing choice in curriculum emphasis. A general humanities course with its infinite possibility of subjects is a good example of a course that could be so developed, while a mathematics course would probably need to be built sequentially.

The supporting student print material can be a significant source of income to offset development costs, as they provide a per-student return. These may include a text, or reader, and a student guide. If the producing institution has a return on the text, there is a return for each student registered, and institutions and students are accustomed to students being required to purchase a text. This is typically the most expensive of the print components, and takes the most detailed academic work. Some institutions prefer to use existing books either to avoid development time and costs, or to utilize a proven product. In such cases, the per-student return is forfeited unless special arrangements can be made with the publisher. As producing institutions continue to demonstrate success, it appears that there will be more possibility of such special arrangements with publishers. Publishers can now see that a video series correlated with a text will drive additional text sales. For the producing institution a proven text is an important advantage in course acceptability and development costs and time. Where publishers and producing institutions can strike a cooperative arrangement on an existing successful text, it is very desirable. However, institutions should think long before proceeding without a return from a text.

Student guides are virtually universally provided to accompany television-centered courses. They are generally shorter than the text, and provide another means for a per-student return; however, there is increasing interest in customizing these materials for particular audiences or for particular institutions. Thus, one cannot expect the same sales as from texts. From a standpoint of flexiblility, one possibility is several versions of the study guide. One could be developed to be used with non-credit students; another for self-paced independent learning, and so on. Perhaps consideration should also be given to developing the guides so as to permit the using institution to make some of its own modifications.

Faculty guides have become standard materials, and support of this type is expected by delivering institutions from the producing institutions. The need for special materials concerned with administrative requirements has declined. On the whole, the suggestions are nearly the same for all courses, and an administrative guide for each course is really redundant.

This book will provide considerable information that will be available to delivering institutions that will further diminish the need for administrative guides. On the other hand, the faculty guides are now more in requirement and more is expected from them.

I am convinced that the distribution of student communication systems will become increasingly important. At the moment they are least transportable, as most fit only one institution; however, for the future, possibilities of sharing seem very good as more institutions

will be designing such communication systems, and they lend themselves very well to the customizing requirements of individual faculty. Thus, the high cost of development of the courseware can be shared by the designing institution while delivering institutions can make their own individual modifications in the basic system at a relatively low cost. For broad utilization, materials developed with consideration for flexibility could have considerable advantage, and thus provide economic advantage to both the delivering and designing institutions.

Summary

The future for television-centered instruction for distant learners is encouraging. More colleges are becoming interested, the course products are improved, and new advancements in communications media hold promise for more capability. Declining traditional enrollment and increased public interest in lifelong learning are powerful incentives for institutions to become involved. However, there are many obstacles that must be overcome to achieve enrollment growth, operational stability, and economic benefit:

1. Producing institutions should work closely together so that comprehensive offerings are available.
2. Producing institutions should design course materials to permit others to modify at a minimal cost, and with a view to widely varied uses.
3. Producing institutions should resolve the serious question concerning methods of distribution of materials.
4. Delivering institutions should not view the video programs as a substitute for traditional lecture-discussion classes, but as one component in a newly configured delivery system.
5. Delivering institutions should develop an understanding of the economics of these courses, so that there can be responsible budgeting.
6. Delivering institutions must accept the requirement to pay to acquire course materials. This is a basic cost for this type of instructional delivery, and the producing institutions must have this return if they are to continue to make materials available.
7. Dramatically improved cooperation from the public television establishment is imperative.

Forming College Television Consortia

By Sally V. Beaty

The voice on the other end of the telephone hesitated. "Could you spell that word?"

"Consortium, C-O-N-S-O-R-T-I-U-M, a number of institutions, in this case colleges, working together to achieve that which no one of them could accomplish as successfully alone."

"Is that something new? I've never heard of a consortium before."

The concept of sustained cooperative action, today evident among colleges interested in instructional television, is not new in either government or private industry. Examples of such efforts are found in many areas of community life. Power companies, for example, are intertied to like organizations in neighboring states, prepared to share or shift energy in emergency situations. Municipalities working together to eliminate a common menace often choose to prorate the cost of the project on the basis of town size and use rather than duplicate efforts. Educational institutions attempting to strengthen their competitive position for grant monies or foundation support find it advantageous to consolidate their efforts.

Today, many colleges across the country are looking for ways in which to respond more creatively to the needs of individuals within their communities. Student enrollments in many postsecondary institutions have dropped. Some colleges are struggling to maintain a comprehensive program as inflationary increases devour existing funds. Caught in the squeeze of a double directive, to both seek new populations of students thus far excluded from the college experience and maintain budgetary integrity, colleges are looking for cooperative ways to finance outreach programs.

Instructional television is a case in point. It is not only "the most direct access for nontraditional students," as R. Brent Bonah, coordinator of television instruction at Bunker Hill Community College notes, it also "extends our capabilities to all segments of the population whether or not they pursue these courses for college credit. . . The number of hours we are on the air provides a low cost public relations campaign for the community colleges, and the system as a whole."

Scattered across the United States are varied examples of colleges working together to offer college courses by broadcast television. Some cover large metropolitan areas; others are linked in a state network; still others might be classified as regional in structure. Large, small, successful, struggling, enterprising, lethargic, highly organized, casually related—an assortment of adjectives apply to the organizations that have been formed. Those who seek to improve an existing arrangement or develop a new consortium can profit from their experiences.

The Complexities of Beginning

In the words of Dan McAuliffe, coordinator of television instruction, Connecticut Regional Community Colleges:

> The bringing together of various institutions, both public and private, for the purpose of forming a television consortium is not an easy task. It often brings together people and institutions representing divergent philosophies and a wide disparity in institutional commitment. It takes firm resolve and dedicated leadership to weld the group together for common purpose.

Leslie Wilbur, consultant to the Southern California Consortium for Community College

Cameraman focuses on "The Growing Years," a Coast Community College District telecourse.

Television, calls this phase of the birth process "The establishment of a consensus." Presidents, boards, faculty, and administrators of the interested colleges must be part of the developmental process, and share in the commitment to provide access to higher education beyond the four walls of a classroom. Success in this outreach program for future students as well as the college is dependent upon the level of commitment each college makes to the concept of televised instruction and distant learning. Deans, department chairpersons, registrars, and instructors play an important part in achieving the goals of the program; their cooperation and assistance in planning should be solicited early in the development.

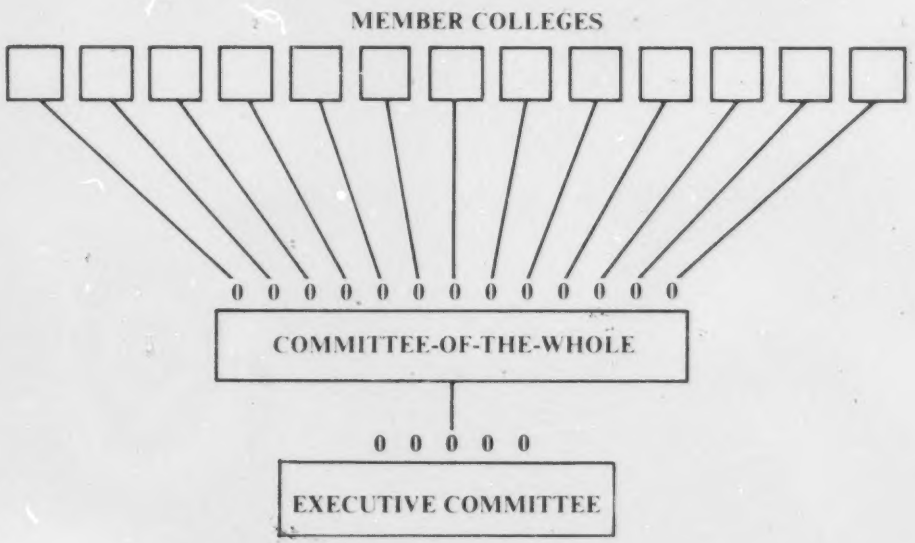
The expectations of the group must be thoughtfully probed: What are the needs of the various colleges? What benefits do they seek from this association? Are the colleges involved primarily interested in using consortial strength to influence state legislation or are they looking for funds and services that can be solicited more effectively from a broad base of cooperating institutions? Perhaps the sharing of production and/or distribution costs is the most appealing facet of the proposal. The purpose of this conjecture is not to suggest or limit the goals and objectives of a budding consortium, but to indicate that the establishment of prioritized goals and objectives is vital in the initial phases of organization. Too often we assume that the goals of others bear an amazing resemblance to our own. This is not always the case, nor is it a necessary ingredient for success if each institution understands and accepts the premise upon which the others are involved, and general goals can be agreed upon. In the spirit of diplomacy, general goals should be established and ranked in their order of group importance.

The agreement to exist is accompanied by several functional decisions—the structure of the organization, how the organization will be funded, and the type of agreement that will bind the group together. Financial and legal arrangements will be discussed in a separate subsection, as well as another critical but often neglected aspect of such a venture—relationships with broadcasters.

Governance

The governance of the organization can be simple and direct: one representative for each college or district in the consortium, equal voice in decision making, majority rules. Consortia regulated in this manner often elect a consortium coordinator to chair the meetings and assume responsibility for administrative detail. Disbursement of consortium funds is handled through the coordinator's college. In other consortia an elected financial officer will assume responsibility for the management of monetary logistics.

It is important that representatives to the consortium be decision-makers on their local campuses. Psychologically, the status of the instructional television effort in that institution



often rests on the rank and the influence of the individual who assumes this role. As a corollary, representatives to the coordinating committee muust be granted the power to make decisions for the consortium—decisions ranging from the selection of courses to the acquisition of broadcast time. If colleges retain veto power over consortium decisions, the life expectancy of the consortium will be brief.

As an alternative to frequent plenary sessions, larger consortia often elect a five- to seven-member executive committee to make many of the decisions requiring consortium action. If the members of this council are elected to staggered terms (two years is common) continuity in planning and implementation can be maintained. Decisions requiring research and study in such organizations can be referred to committees—curriculum, production, finance, legislation, public information—composed of representatives who study and discuss issues before recommending action to the executive group. The council may choose to act on a committee's recommendation or introduce the issue for action at a plenary session. The adoption of the yearly budget in the majority of such consortium organizations is the one issue that must be reserved for plenary action. Some consortia also include course selection in this category.

Administration

During the first few years of consortial operation, the consortium coordinator may be able to administer the affairs of the group. But such an arrangement is temporary at best, dependent upon the generosity of the coordinator's college and the survival skills of the individual placed in a position of such honor. The organizations that have hired an administrator (full- or part-time) and established a centralized consortium office to administer the overall program tend to be most successful. Even if course production is not part of the consortium's mission, maximizing the opportunities and meeting the challenges associated with instruction by television will require both time and effort. Consider this as a partial description of a coordinator's activities:

A. Administrative Leadership
   1. Administers and coordinates the efforts of community colleges in the acquisition and distribution of televised courses for college credit.
   2. Functions as executive secretary to the consortium executive committee, plenary sessions, and subcommittees.
   3. Serves as spokesperson for the consortium at local, state, and national meetings.

B. Curriculum Development
   1. Initiates needs assessments, evaluates, and coordinates selection of courses for distribution.
   2. Works with station management to schedule delivery of three semesters of telecourse programming per year (fall, spring, and summer semesters) over broadcast stations in the area. Seeks additional air time as needed.
   3. Initiates evaluation of telecourses by students and faculty. Analyzes data as the basis for revision of courseware.

C. Marketing Products and Services
   1. Provides course design information, content information, and sample materials to member colleges for curriculum committees, instructors, and administrative perusal.
   2. Develops advertising and promotional materials—brochures, television and radio spot announcements, newspaper publicity—for general use and individual disposition by member colleges.

D. Budget Management
   1. Plans, develops, and submits the consortium's annual budget to the executive committee and plenary session for approval.
   2. Implements the budget—the administration of the budget for each specific television course as well as yearly budget management.

E. Materials Management
   1. Coordinates distribution and bicycling of videotapes for broadcast.
   2. Facilitates procurement of print and other designated components for telecourses. Provides consortium representatives and book store managers with ample lead time for information distribution and ordering. Sees that course materials are available by mail for students who desire this service.

3. Establishes system to control examination publication and distribution.

F. Personnel Development and Training
   1. Provides in-service training for campus telecourse instructors-of-record through orientation and evaluation sessions, and through printed materials.
   2. Designs and conducts additional training seminars and consults with staff upon request from member colleges.

G. Interpersonal Relations
   1. Maintains lines of communication with each member college through the consortium representative and other interested staff.
   2. Meets regularly with other consortia leaders; maintains contact with state educational regulatory agencies and professional organizations.

The financial advantages of beginning such a consortial effort may be obvious; other fringe benefits emerge with time. The opportunities to seek solutions to common problems, for example, or share experiences that work provide a stimulation that buoys the efforts of those involved. At the same time, there is room for the individual response each college must make to the community it serves.

Financial Aspects

Establishing a sound financial base for the consortium is as important to its survival as fiscal security is to any other organization. What minimal kinds of expense should a group not involved in production anticipate?

Course lease fees (including student surcharge)?
Videotape stock?
Air time?
Promotional costs?
Administrative/instructor/staff time?

Frequently, consortial responsibility extends only to lease fee (minus the student surcharge), tape stock, and air time costs. Individual institutions may share portions of the promotional expense for newspaper ad space, radio or television spots, announcements, or brochure development; but they tend to assume responsibility for their own campus instructor, local promotion, and student surcharge expenses.

Financial approaches that are employed to meet the consortium's commitments are varied, but generally they can be grouped in one of the following categories:

1. *Total expenses for the year divided and shared equally by the participants.* The Eastern College Consortium (formerly the Tri-State Consortium) requires equal payment from all of its members, and offers cooperative membership to broadcasters, publishers, and other groups on the same basis. Contributions of cooperative members may take the form of appropriate in-kind services.

2. *Fixed, specified, equal yearly assessment of members.* Washington State Community College Consortium has established a yearly assessment based on FTE students for coordination of the consortium. Course lease fees, as well as promotional and operations expenses, are paid from assessment funds.

3. *Graduated yearly assessment based on use* (enrollment in television courses) *or size of college.* TV College, San Diego, bases its yearly operating budget on the cost of course leases and broadcast time. The cost-sharing formula is revised yearly based on the television ADA of each college the preceding year. A similar plan is used by Community College of the Air in Massachusetts, only the percentage base used is each college's enrollment in the course the semester it is aired.

4. *Yearly assessment based on both fixed assessment and graduated use assessment.* Financial support for the operation of the Southern California Consortium for Community College Television is based partially on the size of the district (as measured by the number of full-time equivalent students) and partially on the number of students enrolled in consortium-sponsored courses. The assessment based on size of the district supports fixed costs of the consortium (staff, air time, course lease fees); the assessment based on enrollment in television courses underwrites telecourse production costs. Data from fiscal year 1980-81 provide the basis for the 1982-83 budget so that advanced planning can occur.

5. *Zero-based budget operation; courses offered through extension or continuing education.* Course fees must cover all budget expenses. The Connecticut Regional Community Colleges have periodically functioned through the extension fund, estimating very accurately the costs of the service and setting student fees accordingly.

For community colleges and state-supported

four-year colleges and universities, the state pattern of funding has a direct bearing on financial arrangements and student fees. Support for students enrolled may be based on average daily attendance or full-time equivalency; it may be offset by tuition fee scales or offered without charge to those who meet resident requirements; it may be categorized under a specific provision of the educational code or considered as other college offerings. A new Brookings Institution study of community college financing, directed by David Breneman with the assistance of Susan Nelson, analyzes the creative and diverse ways state legislators have devised to finance public post-secondary institutions and may prove helpful to those seeking additional information.

In developing an equitable system of financial assessment, several factors should be considered: the ability and the willingness of the members to pay; the criteria upon which assessment will be made; what financial incentives exist for the member institutions; and finally, the system that will take in all these factors. For the good of the order, the system must have a kind of stability which allows for projection, planning, and the maintenance of staff. Ideally, such a plan will also provide an unobtrustive means for verifying data provided by member colleges.

Legal Basis

Most existing consortia today are loosely organized. The legal basis for their existence as a cooperative body is dependent upon the good will and the positive intent of the institutions involved.

Establishing a legal base for the consortium may limit somewhat the degree of flexibility with which the group operates, but whatever restraints are imposed may be more than balanced by the security offered the participants and the freedom from liability.

Smaller consortia often vest legal and fiscal powers in one of the member colleges (see Exhibit A). Some organizations exist under the auspices of the state; other groups, particularly large consortia, tend to rely on contractual or joint powers agreements (see Exhibit B). The process of developing such an agreement often compels cooperating parties to consider the working structure of their organization and issues thay may arise. This process can be extremely helpful in clarifying positions and shaking our potential problems before they occur.

Rotating the legal and fiscal leadership among the colleges or dividing responsibilities will reduce the risk of domination by any one district or the danger of disinterest that comes with second-class citizenship. Some organizations have selected a neutral body to house the consortium. This allows the organization to meet state requirements for legal and fiscal accountability without vesting too much power in any one member.

As with financial arrangements, it is essential to establish a stable legal base that will allow for long-range planning and development. Year-to-year renewals with abrupt withdrawal privileges will diminish the effectiveness of the group. Whatever method is selected for institutional withdrawal should allow time for reasonable, careful transition.

A few consortial organizations are currently considering the advantages of establishing a private, non-profit corporation or foundation. This would be of particular advantage to the consortium involved in production. Business offices of educational organizations are not geared to the demands of a production unit; awkwardness of the arrangement can result in higher production costs and strained relations with sub-contracting agencies.

Relationships with Broadcasters

The strength of a consortium is often strongly affected by the quality of its relationships with the broadcast community. Don Thigpen, dean of learning resources at Daytona Beach Community College, attributes the success of his consortium to the "very close working relationship with WMFE-TV. Other consortia in the state have literally fallen apart, primarily because they do not have a strong relationship with a public broadcasting station."

Commercial, community-based, and college-related public broadcasting stations keep watch over a very important community resource. Their commitment to ascertain and meet the needs of their community parallels the college's commitment to the public it serves. Cooperative consortial arrangements are of particular interest to broadcasters allocating very limited amounts of time . . .

As Elton Rule, president of ABC, noted:

The consortium concept not only enables

broadcasters to respond more effectively to the educational needs of the communities, but helps us to allocate the finite amount of time we have to offer on a more equitable basis for all.

James L. Loper, president and chief executive officer of KCET-TV, Los Angeles, agrees:

> Television stations are better equipped to deal through a centralized unit rather than many individual colleges because of constraints in the areas of available broadcast hours and personnel . . . Public television in general, and KCET in particular, has a commitment to provide post-secondary educational opportunities to the community. KCET views the consortium effort as providing a vital service to our 'publics.'

Service provided by broadcasters may range from gratis production assistance to time available at local scale. Some broadcasters must charge for their time because of the financial structures of the stations. Costs often vary according to the time of day, the day of the week, and the number of stations involved. It is wise to make arrangements six months to a year in advance, and discuss the needs and expectations of both the station involved and the consortium.

Certain realities should be understood:

1. Broadcasters are in a competitive position. The quality of the programming provided by the consortium should be compatible with the normal programming schedule.

2. The times available for college course programming, particularly on commercial broadcasting stations and community-based public service stations, may be limited. The 6:00 to 7:00 am, 6:00 to 7:00 pm, late evening or weekend times frequently available may not sound desirable initially, but they are appealing to the student wishing to have some quiet learning time before work, after the children are in bed, or between weekend sporting events.

3. The broadcaster must be assured of the consortium's ability to deliver tapes on schedule, and provide running times and program information in advance of the air date.

4. Presidential news conferences, freak weather conditions, or auctions may disrupt a scheduled broadcast. Discuss this possibility, and develop a contingency plan before this occurs. Share these plans with students so they will also know what to expect.

In addition to air time, the broadcaster may also provide services such as on-air promotion for courses offered by the consortium, the shipment of video-tapes to and from the producer or library, cassette duplication for use on cable or campus.

For many consortial operations, cable television may provide an inexpensive and flexible alternative as either the primary or optional delivery system. Cable is less expensive to originate because of the cost differential between 3/4 inch cassettes and broadcast tape, and there may be the possibility of adding locally-produced material before or after the leased course. It should also be pointed out that the cable franchise area seldom covers as broad an area as broadcast television. If you use more than one cable system to distribute courses, there may develop a problem in transporting tapes from one location to another.

To return to the original premise, an empathetic, positive relationship between the consortium and broadcasters ranks alongside financial and organizational strength as keys to a successful consortium operation.

Closing Thoughts

When asked why a consortial effort in the area of instructional television was important, Hamilton Maddaford, chairman of the executive council of the Southern California Consortium for Community College Television and dean of instructional resources at El Camino College, said:

> By working together as a group we produce materials no one college could produce singlehandedly. The secret of our success, if any, has been the willingness of all agencies to work together toward the common goal of providing high quality television instructional systems for the community colleges of our region. Most consortia exist for this very reason. As colleges they share a common commitment . . .
>
> to a future in which new technologies will be explored and utilized;
>
> to a future in which there will be increasing demand for lifelong learning and fewer energy and economic resources to provide that learning on the traditional campus;
>
> to a future in which cooperative efforts will become more commonplace;
>
> to a future enriched but not limited by experiences of the past.

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Exhibit A

SAMPLE DRAFT COPY

MEMORANDUM
TO: Harold E. Shively
FROM: _____ President
DATE: October 25, 1978
SUBJECT: Community College of the Air

This letter will reaffirm our commitment to support Community College of the Air until further notice. I recognize that the following guidelines apply to the Consortium and that we will give you a year's notice as to our intent to withdraw from the consortium.

Guidelines:

1. That Bunker Hill Community College will be our representative in negotiating for broadcast time with WGBH and WGBY.
2. That Bunker Hill Community College will sign leases for both broadcast and for rights to rebroadcast telecourses.
3. That college representatives will jointly decide which programs to offer by due process.
4. That Bunker Hill Community College will invoice each college for its proportionate share of all expenses on a per student basis.
5. That other guidelines for each college participating will be developed by the consortium representatives in their bi-annual meetings.

Sincerely,

Exhibit B

OFFICE OF THE LOS ANGELES COUNTY SUPERINTENDENT OF SCHOOLS

CONSORTIUM FOR COMMUNITY COLLEGE TELEVISION

9300 East Imperial Highway
Downey, California 90242
(213) 922-6221

JOINT POWERS AGREEMENT
CONCERNING COMMUNITY COLLEGE TV CONSORTIUM

THIS AGREEMENT is entered into pursuant to the provisions of California Education Code Section 892.6, and of Title 1, Division 7, Chapter 5, Article 1 (Sections 6500 et seq.) of the California Government Code relating to the joint exercise of powers among the following parties.

ALLAN HANCOCK COMMUNITY COLLEGE DISTRICT

BARSTOW COMMUNITY COLLEGE DISTRICT

CERRITOS COMMUNITY COLLEGE DISTRICT

COACHELLA VALLEY COMMUNITY COLLEGE DISTRICT
(College of the Desert)

COAST COMMUNITY COLLEGE DISTRICT
(Golden West, Orange Coast, and Coastline Colleges)

COMPTON COMMUNITY COLLEGE DISTRICT

EL CAMINO COMMUNITY COLLEGE DISTRICT

GLENDALE COMMUNITY COLLEGE DISTRICT

KERN COMMUNITY COLLEGE DISTRICT
(Bakersfield and Cerro Coso Colleges)

LONG BEACH COMMUNITY COLLEGE DISTRICT

LOS ANGELES COMMUNITY COLLEGE DISTRICT
(East Los Angeles, Los Angeles City, Los Angeles Harbor, Los Angeles Mission, Los Angeles Pierce, Los Angeles Southwest, Los Angeles Trade-Technical, Los Angeles Valley, and West Los Angeles Colleges)

MOUNT SAN ANTONIO COMMUNITY COLLEGE DISTRICT

PASADENA AREA COMMUNITY COLLEGE DISTRICT

RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT
(Santa Ana College)

RIO HONDO COMMUNITY COLLEGE DISTRICT

SADDLEBACK COMMUNITY COLLEGE DISTRICT

SAN BERNARDINO COMMUNITY COLLEGE DISTRICT

SANTA BARBARA COMMUNITY COLLEGE DISTRICT

SANTA MONICA COMMUNITY COLLEGE DISTRICT

VENTURA COMMUNITY COLLEGE DISTRICT
(Moorpark, Oxnard and Ventura Colleges)

VICTOR VALLEY COMMUNITY COLLEGE DISTRICT

WEST KERN COMMUNITY COLLEGE DISTRICT
(Taft College)

and

OFFICE OF THE LOS ANGELES COUNTY SUPERINTENDENT OF SCHOOLS, as the party designated to carry out this agreement.

WHEREAS, the aforementioned parties recognize the need for providing Community College courses for credit by means of television broadcast; and

WHEREAS, the aforesaid school districts desire to combine their respective efforts to develop and conduct programs of telecast courses for Community College credit; and

WHEREAS, the Office of the Los Angeles County Superintendent of Schools desires to assist in developing and conducting said programs; and

WHEREAS, the parties to this agreement have determined and hereby declare that it is in the best public interest that these parties join together to form a consortium to accomplish the aforesaid purposes; and

WHEREAS, it is the intention of the parties to this agreement to provide herein for the establishment of the Consortium for Community College Broadcast Television;

NOW, THEREFORE, the aforesaid parties do hereby agree as follows:

1. This agreement shall be effective on execution hereof, and shall continue in effect until lawfully terminated by the mutual consent of all the parties. In the event of a reorganization of one or more of the districts participating in this agreement, the successor in interest or successors in interest to the obligations of any such reorganized district may be substituted as a party or as parties to this agreement.

2. The parties to this agreement are herein designated as Consortium for Community College Broadcast Television (hereinafter referred to as the Consortium) and hereby join together for the purpose of providing community college courses for credit by means of television broadcast. Said Consortium shall consist of each of the parties hereto and such community colleges that hereafter may join in this agreement pursuant to Article 16 hereof.

3. A Consortium Committee, an advisory body, shall be established and shall make recommendations to the Office of the Los Angeles County Superintendent of Schools and the member districts concerning collection and disbursement of Consortium funds.

4. Each community college district that is a member of the Consortium may appoint to the Consortium Committee one representative for each community college maintained by said District. Each representative shall have one vote in any action taken by the Consortium Committee. Votes of colleges within a multi-college district may be cast by proxy through fewer representatives. Action of the Consortium Committee shall be limited to making recommendations pursuant to Article 3 hereof and all action shall require a majority vote.

5. The Consortium Committee shall meet at least four times during the school year and shall have the power to appoint subcommittees and/or an executive council for the purpose of carrying out its responsibilities under this agreement. Time and location of the meeting to be mutually determined by the members of the committee.

6. The Office of the Los Angeles County Superintendent of Schools shall provide consultant and secretarial services to assist in the coordination of the Consortium.

7. Each community college district that is a member of the Consortium shall pay to the Consortium an amount as set forth below. A.D.A. as specified shall be based upon the total district A.D.A. as reported on CCAF 320 for the preceding fiscal year.

REGULAR ASSESSMENT

A.D.A.	AMOUNT TO BE PAID
0- 3,000	* 2,000
3,001- 6,000	3,000
6,001- 9,000	4,000
9,001-12,000	5,000
12,001-15,000	6,000
15,001-18,000	7,000
18,001-21,000	8,000
21,001-24,000	9,000
24,001-27,000	10,000
27,001-30,000	11,000
Over 30,000	Extend the schedule at the regular progression of $1,000 per 3,000 A.D.A.

Plus

C.I.S. ENROLLMENT ASSESSMENT

_____ Units X Enrollment (Census Weeks Average) _____ × $2.00

The total amount payable to the County Superintendent is the total of the regular and C.I.S. assessments. The district shall pay the County Superintendent upon receipt of an invoice.

The Office of the Los Angeles County Superintendent of Schools shall establish and maintain a fund for deposit of the funds received.

8. The Office of the Los Angeles County Superintendent of Schools is the party hereby designated to carry this agreement into effect and, as such:

a. Shall have the authority, on behalf of the members of the Consortium and after securing recommendation of the Consortium Committee, to contract for the Consortium, to appoint any officer or employee of the Consortium and to employ or retain the services of other organizations and individuals as may be necessary or appropriate and to fix and pay their compensation.

b. Shall have the authority to receive, accept, expend or disburse funds of the Consortium by contract or otherwise, for purposes consistent with the provisions hereof,

c. Shall have the duty to maintain at all times strict accountability of all funds received and disbursed and shall give a report of said accounting to each member of the Consortium at the close of each school year.

9. At the end of each school year, the Office of the Los Angeles County Superintendent of Schools upon the recommendation of the Consortium Committee shall re-evaluate the amount of the contribution to be made by each member of the Consortium. On or before the 1st day of August of the second and each succeeding year of this agreement, the Office of the Los Angeles County Superintendent of Schools shall report to each of the members of the Consortium, the amount that has been determined shall be paid by each member for the ensuing year, which amount shall not be increased during that year without the consent of the Office of the Los Angeles County Superintendent of Schools and all districts or other agencies then a party hereto. Said amount shall be paid by the member District on or before September 15th of that year unless said District has given notice of its intention to withdraw from the Consortium pursuant to Article 10 hereof.

10. Any member may withdraw from this agreement and from the Consortium hereby formed by giving written notice of its intention to do so to the Los Angeles County Superintendent of Schools on or

before September 1st of any year. Unless otherwise specified therein, the same shall be effective upon the Office of the Los Angeles County Superintendent of Schools' receipt of said notice. Funds contributed by any member District prior to its removal from the Consortium, shall not be returned to said District except as provided in Article 16 hereof.

11. Members of the Consortium agree that persons within each of the member Districts may enroll without interdistrict permits in telecast credit courses sponsored by the Consortium.

12. Any funds received from the State Superintendent of Schools or from State Apportionments as a result of telecast programs selected or produced by the Consortium shall accrue to the member Districts on the basis of student attendance.

13. All programs and materials developed and produced and copyrights thereof pursuant to this agreement shall become the property of the Consortium.

14. Any community college district that is not a member of the Consortium but that desires to join the Consortium may, upon recommendation of the Consortium, become a member thereof by executing an agreement with the Office of the Los Angeles Couny Superintendent of Schools whereby said District agrees to comply with the terms hereof and to pay the fee prescribed herein or subsequently set by the Office of the Los Angeles County Superintendent of Schools pursuant to Article 9 hereof.

15. In the event of the dissolution of the Consortium, the complete recision or other final termination of this agreement by the Office of the Los Angeles County Superintendent of Schools and by all the districts or other agencies then a party hereto, any property interest remaining in the Consortium following a discharge of all obligations thereof, shall be disposed of as the Consortium shall then determine, with the objective of returning to the Office of the Los Angeles County Superintendent of Schools and each district and other agency which is then a party to this agreement, and proportionate return of the contributions made to such properties by such parties. The inclusion of additional parties to this agreement or the withdrawal of some but not all of the parties to this agreement shall not be deemed a dissolution of the Consortium nor a termination of agreement.

16. Should any portion, term, condition or provision of this agreement be decided by a court of competent jurisdiction to be illegal or in conflict with any law of the State of California, or be otherwise rendered unenforceable or ineffectual, the validity of the remaining portions, terms, conditions and provisions shall not be affected thereby.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be duly executed by their authorized officers thereunto duly authorized as set forth herein below:

By _____
On the _____ day of _____, 1978, by
ALLAN HANCOCK COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
BARSTOW COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
CERRITOS COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
COACHELLA VALLEY COMMUNITY COLLEGE DISTRICT
(College of the Desert)

By _____
On the _____ day of _____, 1978, by
COAST COMMUNITY COLLEGE DISTRICT
(Golden West, Orange Coast and Coastline Colleges)

By _____
On the _____ day of _____, 1978, by
COMPTON COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
EL CAMINO COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
GLENDALE COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
KERN COMMUNITY COLLEGE DISTRICT
(Bakersfield and Cerro Coso Colleges)

By _____
On the _____ day of _____, 1978, by
LONG BEACH COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
LOS ANGELES COMMUNITY COLLEGE DISTRICT
(East Los Angeles, Los Angeles City, Los Angeles Harbor, Los Angeles Mission, Los Angeles Pierce, Los Angeles Southwest, Los Angeles Trade-Technical, Los Angeles Valley, and West Los Angeles Colleges)

By _____
On the _____ day of _____, 1978, by
MOUNT SAN ANTONIO COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
PASADENA AREA COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT
(Santa Ana College)

By _____
On the _____ day of _____, 1978, by
RIO HONDO COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
SADDLEBACK COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
SAN BERNARDINO COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
SANTA BARBARA COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
SANTA MONICA COMMUNITY COLLEGE DISTRICT

By _____
On the _____ day of _____, 1978, by
VENTURA COMMUNITY COLLEGE DISTRICT
(Moorpark, Oxnard, and Ventura Colleges)

By _____
On the _____ day of _____, 1978, by
VICTOR VALLEY COMMUNITY COLLEGE

By _____
On the _____ day of _____, 1978, by
WEST KERN COMMUNITY COLLEGE DISTRICT
(Taft College), and

OFFICE OF THE LOS ANGELES COUNTY SUPERINTENDENT OF SCHOOLS
By _____
Sara Lee Bates
Contractual Relations Officer

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Telecourse Design, Development, and Evaluation

By Stephen K. Mittelstet

My husband and I recently completed [the telecourse] "Earth, Sea & Sky"... Now retired and at or near seventy, it is indeed a boon to us to be able to study comfortably at home without the frustrations of frequent travel and parking.... "Earth, Sea & Sky" seemed to us a very comprehensive course, well put together in all respects.... We learned a lot we hadn't known before, or else had overlooked somehow in these intervening years of employment between educational spurts. Sudden cessation of office work seemed to indicate that we "cool off our heads" slowly. Educational television is the best thing to have come along for those of us who cannot move about as freely as we once did.... Who says retirement has to be dull? One of our friends does express the fear that we may become overeducated for our jobs![1]

How are college telecourses like "Earth, Sea & Sky" designed and developed into "very comprehensive courses" that meet the educational needs of students like these? This chapter addresses this question as it describes the basic components of a telecourse; the process involved in selecting telecourses to be produced; considerations in designing, developing, and producing a telecourse; and methods of evaluating their instructional effectiveness.

The methods described here are not intended necessarily as "the answer" for all occasions. Rather, these are the methods that have evolved and tend to work well at the ITV Center in the Dallas County Community College District. The methods, with slight variations, also closely resemble those used in Coast Community College District's and Southern California Consortium for Community College Television's productions. Most importantly, these methods continue to evolve. They are adapted to the needs of given productions. Other successful models that employ some of the strategies noted in this chapter exist at most of the producing institutions cited in this book.

A telecourse integrates carefully designed video and print materials into a complete learning system wherein students are able to interact with faculty and other "experts" and experiences in a setting as convenient as the nearest television set. According to Coastline Community College instructional designer Tom Gripp, a telecourse "is an examination and presentation of a body of knowledge and information through the use of sight, sound, color, movement, and print in a manner designed to stimulate and increase involvement and clarify and quantify a carefully designed and validated series of learning objectives."[2]

On location for "The American Story," a telecourse produced by the Dallas County Community College District.

Here's a package for learning. The telecourse: "Earth, Sea and Sky," produced by the Dallas County Community College District.

Telecourse Components

Study guide. Essential to student success in getting the most from all components of the telecourse is the study guide. The study guide leads students step-by-step through each component to help them meet the learning objectives for each lesson. This guidance should be given in a non-lockstep manner that encourages the student who needs considerable assistance, while giving the more independent student the flexibility to move in and out of the guide as he or she judges best.

[1]Letter from Coastline Community College telecourse students enrolled in "Earth, Sea & Sky."

[2]Gripp, Tom. "What Is a Telecourse?," an address to a conference on instructional television (Arlington, Texas, February 10, 1978).

The study guide should briefly orient the first-time telecourse student to the learning system approach and should give an introduction to the particular telecourse and its components. Frequently, introductory materials include basic study tips that are helpful to persons who have not been students for some time. Each study guide format usually includes the following basic elements:

- Course overview and goals
- Lesson objectives (usually stated in performance terms)
- Self-graded pretests (sometimes combined with posttests)
- Key words and phrases (sometimes contained instead in the textbook)
- Focus questions that assist in productive television viewing
- Focus questions for reading assignments
- Enrichment activities, both required and optional
- Self-graded (or mail-back-graded) formative posttests.

In some telecourses, the study guide may also present basic subject content, particularly where there may be no textbook for the course. In addition, the study guide is used to comment on material presented in the video program and in reading assignments in an effort to stimulate integrated thinking on a given topic. Throughout each lesson, reference should be made to how particular activities relate to specific learning objectives.

Regardless of the quality of the video program or the other print materials, student surveys consistently rank study guides that include these elements the most useful single component of telecourses.[3]

Video programs. The video program, the obvious element that distinguishes a telecourse from other integrated learning systems, was at one time expected to carry more of an instructional load than at present.[4] As only one component of many in the present telecourse learning system, the video program is now used instructionally to do only what it does best in its medium. For example, television can effectively motivate learning through its ability to grab and hold attention. Obviously, it can bring to the student people, places, and events that are difficult to bring to the classroom. Close-up demonstrations of complex applications can be simplified, clarified, and facilitated on television. Attitudes can be influenced effectively through television.

Instructional designers and producers are able, therefore, to vary the role that each video program plays so that each will complement other instructional components in a given lesson. A video program may, for example, introduce a lesson in a manner that helps students meet only two or three lesson objectives. It may illustrate—through examples, case studies, dramatic episodes, or animation—a concept that may have been introduced through another component of the course. Today's video program is not expected to provide the student with all the information needed to meet all the learning objectives for a given lesson. Some lesson objectives may not be addressed at all in the video program. The information for these objectives may be found in print materials. On the other hand, success in meeting some learning objectives requires students to integrate learning from both the video and the print elements (and sometimes from special outside learning activities as well).

Textbooks, readings, and other print materials. The print medium handles some learning activities better than the television medium can: "Detailed explanations, lists of facts, complex graphic displays, intricate interrelationships between concepts, routine drill and practice are among the kinds of things television usually does less well than . . . print."[5]

The telecourse learning system, therefore, typically includes readings and usually a textbook of some sort. Where excellent commercially published textbooks already exist, particularly in basic "core" course areas, one or more of these texts is carefully integrated into the system. Occasionally a new textbook, specifically designed to accompany the telecourse, is produced. In other cases—where large volumes of reading are not required or where the readings deemed essential are not already published in one anthology—a separate reader or a combined study guide-reader is published.

Given the characteristics and circumstances of the long-distance telecourse learner, required reading assignments are all generally included

[3]Brock, Dee. *ITV Close-up: The First Six Years* (Dallas: DCCCD ITV Center, 1978), p. 32.

[4]For an excellent history of the role of the "talking head" in early instructional television, see Dr. Zigerell's historical survey chapter elsewhere in this book.

[5]Brock, p. 31.

in the student materials "packaged" for the telecourse. When exceptions are made, multiple options need to be given to facilitate access to the materials by the mass audience. (Not everyone can make it to the library. Not all libraries in a broadcast signal area carry the same books. Not enough copies are available.)

Optional enrichment readings can be helpful to self-motivated students, particularly if the readings key on specific learning objectives or elaborate on some concept or controversy introduced elsewhere in the lesson. Telecourses using this technique most effectively tend to keep such readings to three or four per lesson, to key the readings back to something introduced in the video or print, and to give local instructors the option of offering extra credit for activities related to the readings.

Print materials, of course, need not be restricted to the printed word. Dallas' "In Our Own Image" includes a booklet of high quality color art prints of masterpieces to augment what original works of art may be available to students in their particular communities.

Learning activities. Depending on course design and objectives, a variety of learning activities—in addition to reading and viewing—may be required or may be offered as options for enrichment or bonus credit. Dallas' "Earth, Sea & Sky," when offered as a laboratory credit introduction to earth science, requires both at-home and on-campus labs, as does Coast's laboratory version of "Introducing Biology." To assist students in meeting attitudinal learning objectives related to the arts, "In Our Own Image" includes attendance at theater and musical events, a trip to a museum, critiquing audio tapes of musical performances (included in student materials for the telecourse), and a few small group "sharing" sessions, where students interact with each other and the course instructor. Both of Dallas' freshman English composition telecourses require on-campus and mail-in, at-home written compositions.

More commonly, however, learning activities are suggested for enrichment or bonus credit. In Coast's "The Growing Years," for example, students are encouraged to conduct observational studies of children at play, following the guidelines introduced in the telecourse.

An important administrative consideration for learning activities, especially if they are to be required, is that they be designed for flexible implementation, always with an eye to the varied circumstances of the long-distance learner. On-campus labs must be open over an extended period of time, with hours convenient to working people—such as evenings and weekends—and with reasonable make-up options. Attendance at theater and musical events must be offered at a variety of times, while simultaneously limiting the schedule to one that can be administratively managed for mass enrollments.

Communications with telecourse students. Every telecourse has a component or a variety of components designed for student-faculty interaction. Many of these techniques assist the students in obtaining formative evaluations of their progress toward meeting the learning objectives for the course.

Many study guides include self-graded posttests, with answers keyed to objectives, reading assignments, and video programs as a means of communicating with students so that they can self-prescribe review steps. Miami-Dade's RSVP system (Response System with Variable Prescriptions) is a computerized student feedback method programmed with a variety of responses and prescriptions for improved learning that are keyed to each particular response a student might give to formative test questions. Some of the prescriptions, furthermore—mailed to the students in individualized response letters—consider demographic and learning style characteristics of the students.[6]

Most telecourse designs encourage two or three optional review sessions for students preceding summative testing periods; suggest mailing periodic newsletters that give students current information both on course logistics and on related current events and that otherwise encourage students to "hang in there"; and recommend that faculty be available by telephone or personal interview, with appointments being made through a telephone hotline service available during extended hours.

In addition, local colleges need to provide students with an information sheet or pamphlet which lists open broadcast viewing times; relates local college policies and procedures; lists testing, other meetings, and special assignment schedules; and informs them of other

[6]For a more detailed discussion on this topic, see Dr. Anandam's and Dr. Kelly's chapter, "Communicating with the Distant Learner," elsewhere in this book.

services that may be available to them as enrolled students. These schedules are often distributed at on-campus orientation sessions designed to get students off on the right foot with the telecourse.

The underlying purpose behind all these communication techniques is to assure students working largely on their own that "someone cares" and that their success with the telecourse "does matter."

Summative examinations and assignments. Depending on course design and content, mail-in graded assignments may be required. In addition, telecourses offered for college credit require some type of graded examination, typically three or four per course. Most often, these examinations are offered in a machine-graded format in an on-campus, proctored test center environment. To meet student needs, these on-campus testing centers need to be scheduled for an extended period, such as Friday evening and all day and evening Saturday and Sunday.

To assist with test security during these extended examination periods—while concurrently maintaining tests of equivalent difficulty that are testing for equivalent learning objectives—care must be taken to design multiple test forms. Coastline and Dallas, among others, have developed test banks for their telecourses with several questions for each learning objective. These questions—designed by a team of faculty, instructional designers, and testing specialists—are keyed both to learning objectives and level of learning difficulty, so that "equivalent" test forms can be generated, either by computer or by instructor.

As a variation to the on-campus administration of summative exams, Coastline Community College has experimented with awarding course grades based on examinations that are mailed in.

Review cassettes. Although open circuit broadcast telecourses are designed so that one airing of the video programs is sufficient, many colleges arrange to broadcast the lessons two or three times in a week to accommodate erratic at-home student schedules. For additional convenience to students who might have missed the broadcasts and for those wishing to review, cassette copies of the programs are frequently made available in college learning resource centers, public libraries, and other community locations.

Administrative/faculty course guides. To assist administrators and faculty in effectively managing all the components of a telecourse, producers typically provide guides that include a variety of options for administering a given telecourse in a given setting.

These comprehensive telecourse procedures guidebooks generally include an administrative guide, a faculty guide, sample course materials, promotional materials, and additional tips for success in managing and promoting the telecourse. The promotional section often includes sample news releases, public service announcements, brochures, flyers, and tips on student recruitment strategies.

The administrative guide may discuss broadcast considerations, local staffing, tips on student registration and orientation, methods of examination and grading, how to communicate with at-home students, copyright information, suggested "class" sizes, alternative uses of the materials, and lease/purchase arrangements.

The faculty guide generally provides background on the telecourse development process and the credentials of the developers. It outlines course components, details the student's responsibilities and the faculty's role, and discusses each lesson in some depth. Included also may be sample course instructor and paraprofessional job descriptions, sample student newsletters, sample calendars of course administration benchmarks, and test banks with keys and suggestions for student evaluation. Coastline's instructional design specialist, Leslie Purdy, maintains that "we have considerable indication that a first-time telecourse facilitator would be lost without a faculty guide."

The Selection Process

What criteria do telecourse producers use to determine whether to develop a telecourse in a given subject area? The decision to produce a telecourse is a decision to commit significant sums of money and allocations of time, person-

[1]For additional reading and research related to the selection process, see Dr. Zigerell's chapter in this book and the following paper written for the National Institute of Education: Lawrence A. Brown, "Learner Responses to the Use of Television in UMA Courses: Working Paper No. 8" (Lincoln: University of Mid-America, 1975). In addition, Coast Community College District developed in April 1978 a four-phase review model for proposed telecourses, which is available from their Telecourse Research Committee.

nel, and facilities. Key questions, therefore, should be asked and the impact of their interrelated answers should be thoroughly deliberated before that decision is made:

- What is the local student need or demand for the telecourse? (Consider college credit, non-credit, and community needs, demands, and interests.)
- If the telecourse appeals primarily to non-credit community interests, what is the potential for student enrollment or outside underwriting to recover production costs?
- Will the telecourse college credit be transferable to other institutions?
- What, if any, telecourses are already available in this subject area? (Do they meet local needs? If not, can they be successfully modified to meet those needs at a cost lower than that of an original production?)
- What is the potential market for the telecourse to institutions outside the local area?
- To what degree does the proposed telecourse lend itself to the televised mode? (At what expense?)
- What is the potential life of the proposed telecourse? (Will it require frequent revisions?)
- Is the course one that requires prerequisites or will it serve as a prerequisite? (How common is the content of such prerequisites across the projected telecourse distribution area?)
- Are staff, subject matter experts, and funding resources available for the telecourse? (At what expense?)
- What is the length of time projected to produce the telecourse?
- What is the course's potential for recruiting viewers to other courses, both video and on-campus?

Various factors dictate the degree of importance and priority each of these questions may have for a particular production. For example, although local surveys of student and community needs and interests may not have indicated a strong interest in an interdisciplinary telecourse involving economics, history, philosophy, sociology, and the humanities, a major publisher with sophisticated national marketing data and funding sources may be convinced that such a telecourse would receive heavy community and student response. Their convictions, backed up with funds to underwrite both video programs and print materials, might allow a college producer to assist in producing a telecourse that might otherwise be avoided as too "risky" in view of overall answers to the key questions.

On-going state or local certification requirements in a particular subject area, say in real estate licensing, may be so strong that the criterion related to "external" marketability may become insignificant in terms of determining whether to produce a telecourse in real estate. If, on the other hand, reference to specific local, rapidly changing laws can be made largely through print materials (which are less expensive to update frequently), with the video being used to illustrate classic situations that tend to transcend locale and time, then the external marketing potential for the telecourse could be enhanced.

A telecourse in basic college mathematics may be one which student surveys—both local and across the nation—might rank high, but low ratings might occur when other selection criteria are considered. First, what is basic college math? Requirements and prerequisites may vary considerably from institution to institution as they relate to credit transferability. (There may not be enough commonality within the proposed geographic distribution area to answer this question satisfactorily.) Assuming, however, that this question does have an acceptable answer, how well does the subject matter lend itself to television?

Certainly, television can present certain geometric concepts and spatial relationships quite well through animation and other video techniques; interviews with authorities, on-location events, and dramatic sequences, on the other hand, might not lend themselves quite so well to the subject matter. Does the producing institution have local capabilities and experience with highly animated programs? What would be the expense of a highly animated telecourse? The interlinking nature of the answers to these questions and more must be considered before the producer makes the decision to produce.

C. Edward Cavert of Northern Virginia Community College notes that a telecourse such as "Keep It Running" (auto repair for the layperson) can be designed to meet both college credit and community interest needs. "Keep It Running" is offered alternately as a six-credit course in a planned automotive technology sequence *and* as a non-credit telecourse for

persons "tired of paying $47.80 to have a radiator flushed."[8]

Generally speaking, however, a producer need not attempt to get highly positive answers to all the key questions before making a decision to produce. (He or she may never produce!) A decision to make a telecourse that will do everything for everybody will probably result in a product that does little effectively for few. The critical balance resides in the institution's ability to produce a high quality product that can air long enough to enroll a sufficient number of students who successfully complete the telecourse to generate the funds needed to recover development, production, and implementation costs.

Telecourse Design/Development Process

Unlike the production selection process, which is an administrative procedure with minimal faculty involvement, telecourse design and development is an administratively coordinated process which should involve considerable faculty participation. The amount and scope of faculty participation increases as the target audience of the telecourse selected shifts from one that seeks personal enrichment and self-improvement to one that desires "academic transfer" for a higher academic degree. The procedure suggested in *Figure 1* is designed with the academic transfer course in mind. Procedures for career-oriented and personal enrichment telecourses are similar, though frequently less involved, with content specialists (who may or may not be faculty) participating to a degree appropriate for the telecourse being produced.

The procedures outlined in *Figure 1* show tendencies rather than rigidity in sequence or discreteness of category. Some elements may change, overlap, and even disappear, depending on characteristics of the production at hand. It is important to remember that throughout the process the design, development, production, and evaluation of a telecourse is a team effort involving faculty advisors, content writers, content advisory committee members, resource specialists, instructional designers, script writers, producer, film crew, technical production specialists, publishers, research designers, and course facilitators, managed by the project coordinator or executive producer.

The project coordinator either should be a professionally trained instructional designer or should have such a designer assigned to insure that he or she be involved in all aspects of the development process. Effective management of group dynamics and interpersonal relationships is key to the success of such a team project.

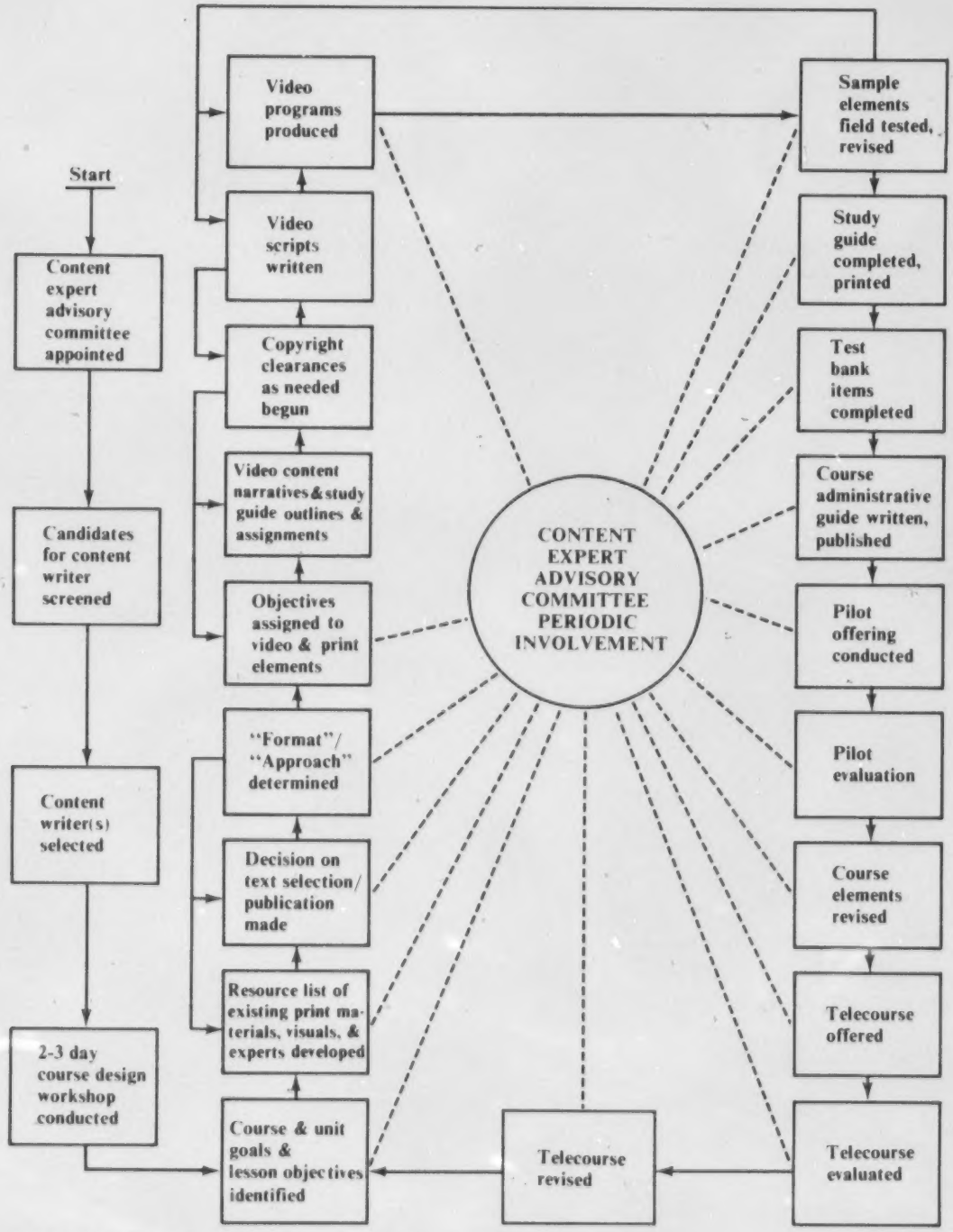
Membership of the content expert advisory committee varies according to course subject matter, the course's anticipated "market area," the development budget, and the projected production schedule. The committee may be composed of five or six "content experts" that include local faculty well-respected by their peers and administration, similarly qualified colleagues from other colleges in the nation likely to use the telecourse, and a nationally respected authority(ies). On other occasions outside advisory committees with only one or two local faculty advisors/writers may work better. The most important considerations, however, are that the group selected can work as a team (prima donnas can wreck a schedule and a staff), that the role assigned to them is manageable and clearly defined, and that the project timetable will accommodate whatever communications lags may be inherent in the relative geographical proximities of the team members to each other.

Frequently one (or more) of the team is selected to serve as the content writer(s) for the telecourse. It cannot be overemphasized that the person selected must be screened carefully for his or her *ability to write in a manner that is compatible with the task at hand.* It is not expected that faculty be able to write television scripts—that role is usually more appropriately handled by professional script writers. It is necessary, however, that faculty be able to communicate lesson content—usually in writing—to a script writer.

Not all faculty can write well; those who can may not be able to write under the demands of a television production. Some cannot write well under the pressures of frequent deadlines. Some cannot translate their thoughts and critical content into succinct statements that can be rewritten for television by script writers. Others cannot construct appropriate test items for the study guide and test bank, even with the

[8]Cavert, C. Edward. "Telecourse Responsiveness to a Student in the Community," an address delivered at a Forum at the Fifty-eighth Annual Convention of the American Association of Community and Junior Colleges (Washington, D.C., April 10, 1978).

Figure 1
Telecourse Design/Development Process[1]


Start
Content expert advisory committee appointed
Candidates for content writer screened
Content writer(s) selected
2-3 day course design workshop conducted
Course & unit goals & lesson objectives identified
Resource list of existing print materials, visuals, & experts developed
Decision on text selection/ publication made
"Format"/ "Approach" determined
Objectives assigned to video & print elements
Video content narratives & study guide outlines & assignments
Copyright clearances as needed begun
Video scripts written
Video programs produced
CONTENT EXPERT ADVISORY COMMITTEE PERIODIC INVOLVEMENT
Telecourse revised
Sample elements field tested, revised
Study guide completed, printed
Test bank items completed
Course administrative guide written, published
Pilot offering conducted
Pilot evaluation
Course elements revised
Telecourse offered
Telecourse evaluated

[1]This model by S. K. Mittelstet is a revised version of an earlier model developed by Linda Agler and Theodore W. Pohrte.

help of professional test designers. Some faculty cannot accommodate the critical appraisals of their writing and the many requests for rewrites that may take place. Still others function better alone than in a team of people, each of whom shapes the writing into formats appropriate for his or her task in the project.

It is unnecessary (and probably impossible) to find a writer who has all the attributes suggested, but the more the writer has, the less time and tears staff specialists will have to spend in helping the writer to overcome the shortcomings. And the more likely the timetable will be met with a quality product. If more than one writer is selected, one must be designated the senior writer or editor with final content authority to insure consistency in product and to facilitate administration.

Course and unit goals and lesson objectives should be developed directly in response to student needs assessment (considering factors such as transferability, existing "on-campus" version course goals, prerequisites, etc.), without thought given to how the objectives might be facilitated by video or print elements. Once these goals and objectives are established, however, considerable attention is given to existing visual and print materials, to what objectives lend themselves best to each medium, and to what types of visual treatments might be used (interviews, dramatizations, on-location films, slides, animation, studio host presentations, etc.).

Early in the development process, "format" and "approach" should be determined. Will there be a studio host(s) or will the entire series be filmed with linking voice-overs? Will the host or narrator have the academic credentials necessary to teach the course? (The critical factor here is whether the host does a convincing job; frequently, a trained actor does a more convincing job before the camera than does an academician unfamiliar with camera demands. Academic integrity is preserved when the actor is required to read verbatim from the telescript approved by the academician.) Further, will the course have a theme? Will it be documentary? Will it tell a story? Will it be designed to "wow" the audience in a discovery process? Does it intend to "woo" the students in a particular subject matter direction? In short, what will be the approach, theme, or format that will hold the programs together as one course?

To help insure that development of the study guide and the test bank is not relegated to the "last minute rush" and that the two components are interwoven with all other elements, content writers need to produce basic outlines of the content for each study guide lesson—complete with reading assignments and self-test and summative test bank items—at the same time they write the content narratives for the video programs. This, in turn, allows the instructional designer(s) and test specialist(s) to assist with study guide writing and to insure that all objectives are addressed adequately by some component(s) of the learning system, while the producer works with script writers in translating content narratives into final scripts.

Since a number of changes may take place in the script before the final video program is completed (changes related to the ability of personnel to obtain the visual effects planned), neither the study guide nor the test bank—which reference the video programs in a variety of ways—can be finished until the video programs are completed. Last minute revisions, however, can be made relatively painlessly if the study guide/test bank copy has been kept current throughout the course development.

If the decision has been made to write and publish a new text for the telecourse, this project should begin immediately following the design workshop. Care must be taken in writing or in selecting a text that the final product is written at a reading level compatible with the intended target audience for the telecourse.

Timetables for producing telecourses following this model vary, usually from one to two and one-half years, depending on the number and length of programs, quality level of production, complexities of design and production demands, production budget, and difficulties in project administration.

Evaluating Instructional Effectiveness

As noted earlier, it is important to involve the research design specialist(s) from the first course design workshop through the end of the production and beyond so that he or she may provide the team with a formative evaluation process throughout the project in addition to providing an evaluative design for the pilot that will be replicated after the telecourse is revised and later conducted in a variety of settings.

Following initial production of the telecourse video programs and a limited press run of the study guide, a pilot airing and course implementation should occur to assess whether all components interact as designed to meet the goals and objectives set for the telecourse.

Figure 2

Criteria for Evaluation of UMA Television Programs[10]

Content Criteria

Are there content errors?
Are there ambiguous content areas?*
Is the content important?*
Is there an appropriate amount of content?*
Is the level of the program appropriate to the level of the course?
Does the program present interesting and challenging ideas?*

Design Criteria

Does the program achieve its intended purpose?*
Is the program either too simplistic or too difficult?*
Is the program well organized (overview, transitions, summaries)?
Is information clearly presented in the program?*
Are there prerequisites for the program?
Are there too many or too few topics treated?*
Does the program develop the main points adequately?*
Are the main points well illustrated?
Are non examples of the main points used?
Does this program integrate with other course components?*

Aesthetic Quality (Production) Criteria

Is there a good balance between in-studio and on-location filming?*
Is the voice-over technique used effectively?
Is the program interesting?*
Are existing stills and footage put to good use?
Is there continuity between sequences?*
Is the program paced too fast or too slow?*
Are the sequences an appropriate length?
Is the level of comments made by the host(s) and other actors appropriate?
Does the program portray relevant human experience?*
Is there a good relationship between the audio and video tracks?
Is the program visually exciting?*

*Asterisk indicates questions on which student data should be gathered.

[10]Aversa, Frances M., and Forman, David C. "Issues in the Evaluation of Educational Television Programs" (Lincoln: University of Mid-America, 1976), p. 13.

Research designs can include both norm-referenced summative evaluation models (comparing relative success of telecourse students to that of their on-campus counterparts in achieving common objectives in like courses and follow-up of both group completers to compare relative success in subsequent related courses) and criterion-referenced models (assessing student progress in achieving course objectives at completion mastery levels contrasted with entry levels).

Figure 2 lists the criteria used by the University of Mid-America to evaluate telecourses. These criteria were published in a paper that discussed seven issues that provide useful guidelines to evaluators of telecourses: selection and commitment of the sample; environment of the evaluation sessions; student and expert review; formulation of an explicit evaluation model; conflicting results from different evaluation instruments; standards and the interpretation of data; and the style and length of the evaluation report.[11]

In addition, information on telecourse strengths and weaknesses can be obtained from at least four other sources: "records . . . of student calls to the hotline service to determine which kinds of questions [occur] most frequently; records . . . of student calls to their instructors to determine which content areas [cause them] the greatest difficulty; surveys . . . administered to students to determine their views of course strengths and weaknesses,"[12] and records of any content errors that faculty may have noticed during broadcasts or in reading the print materials.

Following the summative evaluations of the pilot, a modified version of the process described in *Figure 1* takes place to revise the telecourse components as appropriate. Finally, once the telecourse is revised and implemented, periodic summative evaluations are conducted and attendant revisions are made throughout the life of the telecourse.

[11]Ibid., p. 17.

[12]Agler, Linda S., and Pohrte, Theodore W. "College Credit Courses by Open-Circuit Television," in *Instructional Television: Status and Directions*, eds. Jerrold Ackerman and Lawrence Lipsitz (Englewood Cliffs: Educational Technology Publications, 1977), p. 83.

Role of the Faculty in Mass Media Courses

By Hyman H. Field

In 1969, at the American Association of Junior Colleges' Program for Developing Institutions conference entitled "Strategy for Change in the Junior College," Gabriel Ofiesh made the following statement:

> The time is soon coming when any school system which does not have individualized instruction using electronic media will die on the vine. Junior colleges should be completely committed to individualized learning. The new colleges should have 30 percent of their students off-campus.[1]

This commitment to individualized, off-campus learning in community and junior colleges has not yet reached the proportions called for by Dr. Ofiesh. However, the movement in this direction is rapidly gaining momentum. More than 350 colleges offered a course based on the nationally televised series, "The Ascent of Man." The interest from colleges for the survey of religions course based on the television series, "The Long Search," is nearly five times that great.

The shift to mass-mediated courses which serve off-campus students as well as campus-based classes makes new demands on faculty members. The instruction must be designed so that the material received by the students enables the individual student to successfully progress through the course. This often is a team effort involving course designers at the national and/or local level, content specialists and production personnel as well as the faculty. The faculty member is no longer the major presenter of content, and he or she is no longer able to enter a classroom, close the door and perform for only the eyes of a class. In short, the role of the faculty member in mass-mediated instruction, while still vitally important, must be redefined.

Many faculty in our colleges today have been, and still are, hesitant to participate in mass media courses. Many, in fact, still look upon mass media courses as a threat to their jobs and to their professional standing. One of the many reasons for this lack of enthusiasm stems from a lack of understanding of the role the faculty member plays in mass media. A typical comment from a teacher was cited by Robert G. Simerly in his study of faculty development.

> The minute the university starts trying to plan things for me, that's the day when they can get themselves another professor. I'm not having any organization or any member of an organization telling me what I can or cannot do in the classroom or anywhere else. That's how the university historically has gained its strength—by not allowing the organization to dictate to its faculty members.[2]

Above left: This is a scene from "Keep it Running," the telecourse on auto mechanics produced by the Extended Learning Institute of Northern Virginia Community College.

Left: Scene from "The Developing Image," a telecourse produced by the Extended Learning Institute of Northern Virginia Community College.

[1]Ofiesh, Gabriel. "New Horizons: The Challenge of the New Educational Technology." *Strategies for Change in the Junior College.* Selected Proceedings of the Second National Conference of the Program for Developing Institutions, U.S. Department of Health, Education and Welfare, Office of Education and the American Association of Junior Colleges, Vincennes, Indiana, 15-18 June 1969, Publication No. 8, Sept. 1969, p. 45.

[2]Simerly, Robert G. "Faculty Development in Higher Education: From Myths to Research Findings." Paper presented at the Annual Forum of the Association of Institutional Research, April 1975.

However, as Dr. Ofiesh astutely points out: "Academic freedom is too often a euphemism for sloppy pedagogy."[3]

The team approach in the design and delivery of mass-mediated instruction takes into account two basic principles in teaching.

1. One cannot teach what one does not know.
2. One may know, and yet be unable to teach.[4]

In many institutions of higher education, the second of these principles is often ignored. Even worse, the contrary—if a person knows his subject he can teach it—is often the principle upon which an institution operates. There obviously is little logic to this position. The team approach identifies specialists in the areas of content (often the faculty member), instructional design, production of mediated material, and administration of instructional delivery systems. These specialists are given responsibilities in their areas of expertise and jointly develop a course substantially stronger than any person could produce alone.

The faculty, who have the reputation of being the people most resistant to change, must be willing to participate in this team effort and use their particular expertise to the best advantage. As Mayrelee Newman points out: "To challenge and experiment, professional staff must be willing to re-examine hallowed procedures, and where they seem nonessential, be willing to cast them out."[5]

To participate as part of this team allows the faculty to function on a higher professional level.

> In my mind, what we have been talking about when discussing change through technology is setting the teacher free—raising the teacher role to an even higher mark of dignity and distinction, i.e., involving him in a process that will draw on all his human resources—cultural, intellectual and temperamental.
>
> We've been talking about a greater emphasis on student learning and lesser emphasis on teacher teaching.[6]

While the specific role of the faculty will vary from institution to institution and from course to course, there are certain responsibilities and tasks that are generic to all mass media courses.

It should be pointed out that the faculty role is that of a faculty engaged in the adoption and delivery of a course which has been produced by another institution or agency. While many of the same tasks and responsibilities are involved in both the development and the adoption of a mass media course, there is an essential difference in both the character and degree of faculty participation. Since most colleges will be adopting material produced elsewhere, that will be the emphasis in this chapter. Also, the author assumes that most of the readers have a basic understanding of the course development process and the resultant high instructional quality which is inherent in most mass media courses.

Administrator Responsibilities

To be most productive, faculty participation should begin at the very outset of a television-related project. The faculty member should be involved in the decision to use the television material, in the modification of that material, and in the delivery and evaluation of the material. It is up to the administrator to see that this involvement occurs.

One of the most important responsibilities for the administrator is the selection of the appropriate faculty member to serve in these various capacities. Certainly, the faculty member should be competent in the content area which is being taught in the television course. But beyond this competency there are two oth-

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[3]Ofiesh, *op. cit.*, p. 45.

[4]Seidlin, Joseph. "Faculty Innovation: The Teaching Consultant." *Strategies for Change in the Junior College*. Selected Proceedings of the Second National Conference of the Program for Developing Institutions, U.S. Department of Health, Education and Welfare, Office of Education and the American Association of Junior Colleges, Vincennes, Indiana, 15-18 June 1969, Publication No. 8, Sept. 1969, p. 25.

[5]Newman, Mayrelee. "Catalysts For Change in Learning Resource Support." *Strategies for Change in the Junior College*. Selected Proceedings of the Second National Conference of the Program for Developing Institutions, U.S. Department of Health, Education and Welfare, Office of Education and the American Association of Junior Colleges, Vincennes, Indiana, 15-18 June 1969, Publication No. 8, Sept. 1969, p. 40.

[6]Lahti, Robert E. "Education for Whom?" *Strategies for Change in the Junior College*. Selected Proceedings of the Second National Conference of the Program for Developing Institutions, U.S. Department of Health, Education and Welfare, Office of Education and the American Association of Junior Colleges, Vincennes, Indiana, 15-18 June 1969, Publication No. 8, Sept. 1969, pp. 73-74.

er characteristics which the person should possess and for which the administrator should look. The faculty member who will be working with the television course should have a basic understanding and sympathy for this particular delivery system. He should realize the capabilities and limitations of the television medium and he should feel that television is appropriate for the presentation of the course.

Ideally, the person selected should be an experienced teacher. This faculty member should have taught in the classroom and understand the nature of students, particularly students in the course discipline. He or she should be able to anticipate the questions, the problems, and the other points in a course where student/faculty interaction may be required. The ability to identify these critical points within a course can only come from experience in the classroom, but it is a critical element in making the telecourse a successful experience for the students who enroll.

The administrator should make it a point early in the process to fully inform the faculty member of the nature of the task or role in which he will be asked to perform. As stated earlier, this role will vary from institution to institution and from course to course; but whatever the role, the faculty members should have a clear understanding of what is expected of them. Faculty members should know exactly what they are expected to do in the development of the course, in the delivery of the course, and who has the specific responsibility for each element. By making this role definition explicit at the outset, many future problems of territoriality or false expectancy can be avoided.

The administrator must also take measures to cut the red tape which often exists at various institutions and may hinder the use of televised instruction. A very important part of this process is that of determining the appropriate student load for a televised course. This load may be greater or smaller than the load for the equivalent taught at a regular campus-based section. The number of students which a faculty member can be expected to deal with in a television course depends on the type of work the faculty member will be expected to do. For instance, if he or she must conduct a number of seminars at various locations, read and grade a large number of essay exams for each student, and read and grade themes and other types of written work, then the student load may be quite low. On the other hand, if the faculty member's assignment is primarily that of contacting students who are having problems within the course, answering questions which students may have, and grading objective tests, the student load may be much larger. A technique which seems to work in assigning student load is to determine, with the faculty member, what the tasks will be and how many students can be handled within the work time equivalent to one credit hour. The total number of students enrolled in the course can then be divided by this number to decide the appropriate credit assignment for the faculty member.

Often television courses, particularly those scheduled and broadcast by public broadcasting stations without input from the colleges, fall outside the normal quarter or semester. The administrator must therefore make arrangements to have the faculty assignment which coincides with the television broadcast. This assignment may begin in one term and continue through one or more additional terms, depending on the length of the television broadcast. This can be accomplished in a number of ways, ranging from assigning the faculty member a large number of credits at the outset (to cover his work in subsequent quarters) and to assigning partial credit in each quarter. Whatever method is used, however, it is important that a faculty member be involved in the course from beginning to end, including those times when a television course may be broadcast between terms or over breaks.

Lastly, the administrator must be sure to provide the faculty members with the type of support which will make it possible for them to devote their efforts to the instructional aspects of the television course. An important aspect of this support is that of adequate clerical assistance. The more atypical the course or the delivery of the course, the more complicated administration becomes. Clerks should be assigned as many of the administrative responsibilities as possible. They should receive and log in student work. They should respond to administrative questions such as: where to submit work, how to make up for a missed telecast. They should be able to mark objective tests. They should record student grades and return work to students. And they should send out student assignments. In short, let the fac-

ulty member concentrate on the instruction — let the clerk concentrate on the administrative details.

The administrator should provide an office with a telephone and duplication services. The primary contact between a faculty member and television students is often the telephone or the mails. Therefore, these media must be made available on a continuing basis. Faculty must be able to duplicate assignments and supplemental material to send them to the students since this is one of the primary means of supporting the students in their course work.

Development Stage

It is at the development stage of a course that the role of the faculty member or the division of labor in the development varies greatly from institution to institution. In some institutions, the faculty member will be responsible for only the content of the course. Another professional, such as an instructional technologist or an instructional designer, will be responsible for the teaching strategies and delivery techniques to be used in the course. In other institutions, the faculty member alone has the entire responsibility for the development and delivery of a course. The latter circumstance is much less desirable because the advantages of the team approach are lost.

The following tasks must be accomplished in the development of a television course whether they are done by a faculty member or by a faculty member and an instructional technologist team:

1. The course must be approved and officially listed in the college curriculum. Most television courses will fit some existing course description. This must be determined by each institution using the course. If the course does fit a description, it can be offered as that particular course. However, in some cases, a new course must be approved. Usually this entails a course description and a listing of course objectives, which have to be approved by a curriculum committee at a college. This sometimes is a time-consuming endeavor and is impossible to do before a nationally-telecast series begins. Therefore, a third alternative, though one which is not as desirable, can be used. The course can be listed in a "catch all" category such as Seminar & Project or Individual Study. This should be used as the last alternative since it does not give the student an accurate description of the course and does not give a fair indication of what the student has done when it is placed on a transcript.

2. The course objective must match college objectives. The faculty member must carefully compare the objectives of the television course with the objectives of the same course that is taught at the college. If these objectives are identical, then the television course can be used without modification.

Most likely, however, there will be some variance between the two sets of objectives. If the objectives are essentially the same, but are in different sequences, there will probably be little problem in using the telecourse. The only problem that might occur in this instance is when the television course covers more than one term. For instance, a course in English literature may be a two-semester course. If the sequence of the objectives in the television course places some objectives in the first term which are normally in the second term, it may be necessary to re-sequence the course so that students will be able to transfer between courses at the semester break.

The problem which most often occurs is that one or more objectives at the regular course may be missing from the TV version. If this happens, the faculty member will be responsible for designing auxiliary material in order to cover the missing areas. Sometimes other available production material may fill the gap, but more often the missing ingredients will have to be freshly designed and produced. This need not be additional television material, but could be print, audio cassettes or seminars. In this same vein, there may be material in the television course which goes beyond the objectives of the course at a particular college. In this case, the faculty member must determine what and how material is to be omitted.

3. Student requirements must be designed. The faculty member must determine the number of tests to be given during the course and must determine the types of tests which are to be used. The types of other required work, such as essays, reports, and seminars, must be decided upon and designed. Supplemental work which might be used for extra credit should be designed. This could include additional reading, research papers, seminars, field trips and special projects. The faculty should also determine what the grade requirements are for the course and whether students will be able to con-

tract for different grades or if the same requirements are exacted for every student in the course.

4. The specific delivery of the course must be designed. A television course, for instance, may be offered by broadcast and/or by placing cassettes in learning resources centers and other community centers. The delivery method which is most appropriate for a given institution must be determined. How testing is conducted must be ascertained. Will the testing be proctored at a given location, or can the testing be taken at an off-site location? Will seminars or other gatherings occur on a campus or will they occur in various community locations?

Another very important aspect of the delivery of a television course is the schedule for submission of assignments. One faculty member may be serving a large number of students. Therefore, assignments should be spaced throughout the television course so that they are not received at one time. In this process the type of assignment should be taken into consideration so that all essay type test or term papers are not grouped at one point. This has sometimes been a problem in television courses. A faculty member has assigned objective tests for the mid-term or unit tests but then has given the students essay questions on a final exam as well as requiring a final term paper. As can be seen, the work load at the end of the television course is going to be quite large. To prevent this, assignments should be scheduled so that the work load is spread throughout the entire course. When designing the delivery of the course, the faculty member should also take time to design prescriptions for students who have missed questions or assignments. When students turn in incorrect work, some provisions should be made to get feedback to them. Ideally, this feedback should not only tell students they are incorrect, but should also give them direction as to how they can learn the correct information. In a classroom setting, this often happens in the discussions which occur after tests or papers are turned in. In a television course this has to be sent to the students in writing and it is most easily designed before the course begins.

5. The management of the course must be designed. The faculty member should establish a certain number of hours during which the students may call or arrange conferences. The faculty person should also have hours set aside during which he can contact students who may not be able to call or come in during the scheduled office hours. These hours should be flexible to accommodate the needs of the many different students who may be enrolled in the course.

The assignment of responsibilities for the course between the course clerk and the faculty member should be carefully specified at this point. As stated earlier, the course clerk should handle as many of the administrative details as possible. However, in some courses faculty members may wish to handle some of these items themselves.

6. A method must be designed to inform the students of all the requirements. In a telecourse, the packet of material sent to the student following enrollment may be the initial contact for the student with the faculty. Therefore, this material must tell the student *everything*. It should include such items as a letter introducing the faculty member to the student, a list of course objectives, general directions to the student for participation in the course, specific course requirements, specific dates when material is to be submitted, information to a student about how to withdraw, study questions for examinations, a list of books and other materials which will be required for the course, information about where the books may be purchased, information on grading, information about how to contact the faculty member, and information about when and where to take examinations. When *everything* has been included in this material, the students will still have a number of questions. Therefore, the faculty member must be sure the material designates whom to call for specific information.

During the Course

The faculty member's role in a television course is quite different from that in a classroom setting. This is more evident during the delivery of the course than in the development of the course. One of the most obvious differences is that the faculty member is now dealing with students at a distance. Student-faculty contact is most often by telephone or by mail. Seldom does the faculty member see a student face to face, and when he does, it is usually on an individual basis.

The faculty member in a television course seems to be called upon more often to justify the materials. Students tend to contact the in-

structor more often to inquire about answers which are given for particular tests. Similarly, if students are to receive a prescriptive diagnosis for their responses during the course, the faculty member must prepare analyses for wrong answers as well as for right answers. These analyses must not simply state that the answer is incorrect but why it is incorrect and why another answer would have been more appropriate.

Another major characteristic of a television faculty member's role is that it is a much more public role than that of a classroom instructor. Not only is the material available for all of the students who are enrolled in the course, they are also more easily accessible to the general public. More importantly, the material prepared by the faculty members for television courses is available to their peers. Consequently, the work the faculty does is more often analyzed and criticized by fellow faculty members than would occur in the case of a classroom instructor. They cannot operate behind closed doors. From a positive standpoint, the prospect of public scrutiny often results in designed and produced courses. However, television faculty members must be confident of their abilities and of the material which they produce, and they must not be afraid to undergo the inspection by their peers.

During the offering of a telecourse the faculty member has some very specific tasks which must be accomplished. Every student who enrolls in the course must be tracked. The faculty must know which students are progressing well and which ones are having problems and which ones are not doing any work at all. The faculty must be able to identify students who have problems and provide them with the type of help that will help them succeed in the course. The faculty member should also contact students who are not keeping pace and find out what the problems are and give the students appropriate help.

This aspect of a faculty member's job is not one to be taken lightly. Since the feedback given to a student is on an individual basis, the faculty member may have different feedback for each student. In cases where students are in a self-paced system (such as cases where television courses are placed in LRC's), the students may not only need individual feedback but feedback based on their particular progress in the course. The faculty member, therefore, is called upon to respond to individual students who have just begun a course as well as to students who are well into a course and may be preparing for their final examination.

During the course, the faculty member should evaluate all of the course components and be prepared to make necessary revisions if the course is to be offered again. In some television courses, the faculty member will see the telecasts for the first time at the same time the students see them. Therefore, some of the material which has been prepared may not be adequate for a particular telecast or may have a different emphasis. It is during the initial offering of the course that the faculty member can identify these problem areas and prepare revisions to rectify these problems the next time the course is offered.

Of course, the faculty member will also be called upon to conduct seminars, field, trips, or any other special sessions which are designed into the course. If the faculty member is handling a large number of students in the course, he or she may have to conduct the seminars and workshops a number of times and possibly in a number of locations.

Summary

In summary, the role of the faculty member in a mass media course is a vital role. But it is quite different from that of the classroom teacher. It is not a role with which all faculty will feel comfortable but one which can be challenging and exciting for a creative teacher.

The faculty member in a mass media course is no longer the principal presenter of information. The teacher's role can, perhaps, better be described as that of a manager of instruction. The faculty member must insure that everything is included in the course. He/she must insure that everything is accurate and that everything is in the proper sequence. He/she must make decisions for remedial and supplemental work on the basis of individual student needs. And even though the faculty member is not the principal presenter of the content, he/she is still looked upon as a final authority for content, completeness, and accuracy.

The faculty member in a television course now has the opportunity to deal with every student as an individual rather than dealing with a group. This can be either a positive or negative factor in a learning situation.

Communicating with Distant Learners

By J. Terence Kelly and Kamala Anandam

Education is essentially a process of communication. In classroom-bound learning arrangements, the lecture-discussion method has prevailed, utilizing the dynamics of interpersonal and interactive communication. This chapter, in contrast, will focus on communication from the perspective of a distant learner for whom time and space for learning are extended. Emerging forms of technology will be presented to emphasize their potential for improving the effectiveness of learning at a distance.

Communication has been a function of human life from the earliest known civilization to the present. Language, oral and written, has served as the prime facilitator in information sharing, despite the advent of new means of communication. Although the forms of communication have varied with time, their purpose of transmitting and receiving thoughts and feelings has not changed. Distant communication is, likewise, as old as the human race. Primitive ways of reaching people at a distance included the use of drums, fire, message sticks, smoke signals, petroglyphs and hieroglyphics. These were followed by the printed word. No single technology so revolutionized the art of distant communication as did the printing press. In more modern times, the invention of the telegraph, the telephone, the radio, the motion picture film, and television have advanced long-distance communication immensely. Current technology points to such distant communicators as international orbiting satellites, interterrestrial communicating feedback systems, and sophisticated worldwide computer networks.

The cultural trends in communications are also reflected in institutions of higher education whereby the custom of assembling at a given place and time no longer constitutes the monopoly on arrangements for learning. In this country, television is accessible in almost every home, school, and public place. Consequently, reaching the masses via this medium is not a problem. The challenge lies in effective use of mass media by educators.[1] As a response to this challenge, programs under the banner of open learning, extended education, distant learning, and outreach instruction are gaining momentum in colleges and universities.

Traditions and conventions that permeate educational institutions have generated a myth among many persons that learning at a distance cannot be effective. Evidence indicates that learning *can* be effective, regardless of the mode. Pertinent to this issue are the conclusions from a novel investigation of the relationship between achievement and instructional arrangements. This study summarizes comparable data from 91 investigations in the areas of: accounting, algebra, American government, biology, chemistry, child development, education, engineering, English composition, history, mathematics, physiology, psychology, quadratic equations, general science, natural science, physical science, speech, and statistics. Comparisons were made among the following instructional conditions: lecture, discussion, several arrangements of lecture-discussion meetings, supervised and unsupervised independent study, television, and programmed materials. Analyzing the data, the authors concluded that the results

Setting the scene for "Man with No Time for Beauty," one of the 30-part "The Art of Being Human" series produced by Miami-Dade Community College.

[1] Helmantoler, Michael C. "The Non-Traditional College Student and Public TV." *Community and Junior College Journal* 48: 13-15; March 1978.

"demonstrate clearly and unequivocally that there is no measurable difference among truly distinctive methods of college instruction when evaluated by student performance on final examinations."[2] More research will be discussed later in the chapter, but suffice it to say now that it is possible to learn equally well from a distance as it is in a face-to-face situation.

One of the reasons for the growing popularity of external learning programs is that the previous dilemmas associated with distant communication are beginning to dissipate. At the heart of the problem has been the difficulty of determining whether there has been a receiver and a sender of the same message. The perplexity of this basic problem becomes rather critical for behavioral changes which are the goals of education. For any particular activity to be incorporated into the behavioral patterns of an individual, it must be internalized and interpreted as meaningful and relevant by that individual.

In face-to-face situations, messages can be decoded, corrected, and understood more readily than in situations where people are separated by time and distance. In communicating at a distance, the sender hardly knows whether the message is being received. The opportunities for a sender to receive feedback have been limited when mass media—newspaper, radio, and television—are utilized. Letters to the editor, public opinion polls, program ratings and the like have helped in a limited way to obtain the pulse of the reading, listening, or viewing audience.

In the case of external learning programs, can the sender (the teacher) assume that the instructional message is being received by the distant student? Can the teacher assume that the desired behavior will be exhibited? Without *feedback* from students, the teacher can only resort to speculations. It is possible to obtain *feedback* with more sophisticated forms of technology, sometimes instantaneously, despite the distance. The more immediate and comprehensive the *feedback*, the better the chances are for necessary adjustments.

A cursory glance at what is currently occurring in homes, restaurants, hotels, department stores, banks, and grocery stores demonstrates the place of technological innovations in automating and facilitating our communications and transactions. The reliance on the computer for production and management activities in industrial and commerial firms is established, and its widespread use by consumers in their homes is on the horizon. User feedback is likely to become the most crucial factor in decision-making in politics, government, industries, banking, and marketing. Education is not barred (although one would think it is) from the use of these dramatic advances in communication technology. Unfortunately, education is lagging behind in its willingness to take advantage of these possibilities.

If, in their preoccupation with day-to-day responsibilities, educators have failed to recognize the pervasive impact of the technological revolution, they should now take the time to examine reports which will help them visualize the way of life in the coming years. "Time projection," as some psychologists call this activity, is not a luxury but a necessity in educational planning, particularly for distant learning, since it relies on mass media. The article, "The Age of Miracle Chips," offers a vivid panoramic view of the future. Shopping by computer TV, participatory television viewing, computer-run appliances, and living without handling money are but a few illustrations. The argument that the computer is dehumanizing can hardly be defended in light of microtechnology that can bring custom-made products within everyone's reach by the push of a button. As stated in the article:

> To ask what the applications are is like asking what are the applications of electricity. Certainly, the miracle chip will affect American life in ways both benign and productive. Far from George Orwell's gloomy vision of nineteen eighty-four, the computer revolution is stimulating intellects, liberating limbs, and propelling mankind to a higher order of existence.[3]

In light of this imminent technological revolution, why could not educational programs be tailored to fit the uniqueness of individuals? Those educators blessed with vision are deliberately working to modify their institutions' structures and learning environments to make

[2]Milton, Ohmer. *Alternatives of the Traditional.* San Francisco: Jossey-Bass Inc., Publishers, 1972. 156 pp.

[3]"The Age of Miracle Chips." *Time*, February 20, 1978. pp. 44-59.

the most effective use of these new technological innovations for instruction. In a modern technological society, it is most appropriate that education be technologically organized for its teaching mission.

A variety of technologies is available for communication. Each of the media has developed a quality and a character of its own. *Flexibility* and *selectivity* are the cornerstones for building a media-based instructional program for distant learners. *Flexibility* provides various avenues for learning. The audience for distant learning is as heterogeneous as the nation's people; their prior learning and expectations vary as do their characteristics. What one can learn from an audio cassette, another might learn equally well, if not better, from print materials. Although group-based delivery systems generally do not cater to the individual student's needs, programs for distant learning have the potential to meet these learning preferences by virtue of the use of multi-media adaptations.

If distant learning programs are not designed in terms of the needs of the individual student and the circumstances in which that learner happens to be, they are likely to witness the "rise and fall" phenomenon inherent in a fad. Certainly, the use of mass media, such as open circuit television and radio, are not new to higher education. What is significant is the present emphasis on: providing a rigorous academic process for course development; exploiting the media for its optimum value; and designing communication systems to support students on an individualized basis. It is not accidental, then, that the number of students enrolling in open learning courses across the country, indeed the world, is steadily increasing. In a survey conducted by the University of Mid-America (UMA), it was found that 11 institutions offering television courses reached a total potential adult audience of 22 million in 1975, of which 22,000 enrolled in television courses. In other words, one out of every 1000 adults in the community enrolled in television courses; in some instances it was one out of every 260.[4] The necessity for flexibility when dealing with such numbers can hardly be overstated.

Each medium has its strengths and weaknesses. From the learner's perspectives, the media can arouse their emotional involvement, pace their efforts, transmit information, highlight significant ideas, illustrate abstract concepts, clarify complex themes, stimulate thinking, and provide feedback. *Selectivity*, then, means the selection of a purpose and the selection of the medium to match the purpose.

The way of life in the technological world of tomorrow dictates that external, media-based learning should be pursued as a viable alternative for instruction. There is sufficient research evidence to demonstrate that distant learning can be an efficient means to gain new knowledge. Thus, there is ample justification for continuing this mode of instruction in its present form as well as for experimenting with newer methods.

Communication Methods in Distant Learning

In this section, communication in distant learning will be discussed from two perspectives: transmitting information and maintaining two-way communication. Much of what will be said has for its source the experiences of several community colleges and universities in the United States and the Open University in Great Britain.

For transmitting information, the invention of the printing press is yet to be surpassed in its dramatic impact in linking the world's people together. Distant learning programs rely heavily on print materials—as textbooks, anthologies, study guides, workbooks, newsletters, and newspapers. These materials, when used for on-campus classes, do not acquire the prominent status they do in the external learning mode. In the classroom, the instructor invariably becomes the prime transmitter of information. The enthusiasm of the instructor to convey the information and the eagerness of the student to receive it are presumed to be conducive to communication at a fixed time and place. More often than not, the instructor chooses the information to be transmitted. In contrast, most of the institutions engaged in the development of media-based courses have a design team consisting of instructional technologists, curriculum and learning specialists, editors, and faculty to develop educational materials. Thus, individual talents are brought

[4]Wall, Milan, and Brown, Lawrence. "Report of the University of Mid-America Office of Marketing and Information Survey of Institutions Offering Television Courses." Lincoln: University of Mid-America, 1978. 20 pp. (Unpublished).

together in a collaborative effort that can result in quality programs.

The team approach in producing the print materials for an open learning course sets the stage for the specialists in academic content and media teaching to come together to enhance the instructional process for the student. Not so obvious an advantage for any educational institution in this process is the built-in faculty training that inevitably occurs. All departments should engage in such collaborative efforts, even for oncampus courses. A cross section of almost any college faculty is at best a randomization of talent. Some are proficient in lecturing, some are skillful in planning and developing curriculum materials, and others are effective in working with individual students. But they are *all* assigned classes to teach. By engaging in cooperative planning and teaching, where the strengths of each professional's talent can be maximized and weaknesses minimized, the opportunities for better student learning and greater student satisfaction exist.

Curriculum materials developed for most open learning programs have broad utilization, more so than the hand-outs prepared by an individual faculty for a class. Statistics (as of 1976) show that the print materials prepared for the British Broadcasting Corporation's television series, "The Ascent of Man," were used by some 40,000 students in 420 institutions throughout the United States; approximately 275 institutions offered another college credit course based on a BBC production, "Classic Theatre," to 11,000 students; 15,000 students enrolling in 300 institutions took the American-produced course "Adams Chronicles."[5] The fact that the print materials developed at one institution reach students across the nation suggests that the print materials must be comprehensive, complete, and precise in their presentations. Collectively, quality print materials can be produced given appropriate expertise in learning, design, writing, and content. The economic feasibility of teamwork and the shifts in faculty role are discussed in other chapters.

Television is another medium for transmitting information and, undoubtedly, the most visible component in an open learning course. Institutions are likely to be attracted to an external couse, if it is accompanied by a television component. The video portion of the courses tends to be more appealing to the students as well. As a powerful tool in communication, television is unmatched—the color, the action, the setting and the script bring alive the ideas and concepts to the students. Television programs like "Sesame Street" that have cogent story lines, entertaining features, animation, and motion have proven the didactic capability of television for young children. The same holds true for adult students. The challenge to capitalize on the unique character of television rests with the creative minds at institutions of higher learning.

Radio, as a medium, has been underused for instructional purposes for external programs. It has many advantages, not the least of which is the cost in comparison to television production. In addition to open circuit radio, many closed circuit systems or sub-systems are available, and the audio cassette player is almost a universally owned gadget in the home, office, or car. Dramatic and emotionally packed radio series can be produced, and some community colleges and universities have used radio-based courses with positive results.[6] With the advent of National Public Radio we are witnessing a resurgence of the potential for the effective use of radio as an educational medium. "American Issues Radio Forum" is an example of nationally aired radio programs for distant learners.[7] Radio and audio-based open learning courses have a great potential for serving distant learners because of their flexible delivery forms.

The telephone is used by a large majority of the institutions which are offering courses in remote mode as a means of maintaining two-way communication between instructor and students. Teleconferences, student/faculty initiated calls, answering services, and phone-in

[5]Chamberlain, Martin, N. "Access to Broadcast Courses for Credit." *The Third National Conference on Open Learning and Nontraditional Study*. Lincoln: University of Mid-America, June 1976. pp. 181-182.

[6]Daughtry, Jody. "A Flexible Approach to Off-Campus Instruction." *Community and Junior College Journal* 48: 37-39; March 1978. Robertson, E. James. "Who Is Doing What, Where, and How?" *The Third National Conference on Open Learning and Nontraditional Study*. Lincoln: University of Mid-America, June 1976. pp. 189-193.

[7]Norwood, Frank W. "Communications Technologies: Means for Outreach." *The Third National Conference on Open Learning and Nontraditional Study*. Lincoln: University of Mid-America, June 1976. pp. 177-180.

radio programs are some of the methods which utilize the telephone for this purpose. Faculty initiated calls have been used systematically and successfully in helping students understand the course content. Similar faculty action has demonstrated that the telephone can play an important role in student retention and performance.[8]

Teleconferences, in which there is an opportunity for interactive exchange of information among large groups of people, can greatly aid distant learning because instantaneous two-way communication becomes possible. STEP, the Satellite Tele Education Program, coordinated by the Distance Education Planning Group of the British Columbia Ministry of Education, has provided programs for the general public, students, forest workers, health professionals, librarians, and teachers. STEP is able to transmit live, interactive programs to remote sites across the provinces.[9] Roche Laboratories has completed its experimentation with teleconference with interactive capability to communicate with distant learners all across the country. One experiment involved 120 physicians from all parts of the United States.[10] Educational telephone networks at the University of Wisconsin and Kansas State University are successfully providing educational programs in their respective states and have even combined their capabilities to coordinate a teleconference program for clergymen across the two states.[11]

CEN, the Cono Educational Network in Walker, Iowa, uses the telephone very effectively for instruction for grades nine through twelve in four schools. With this network, children have received instruction from specialists from as far away as Canada and Florida. It is claimed by the users of CEN that telephone instruction disciplines both teachers and students to be more attentive while listening and more precise in verbalization.[12] While the success and benefits of a teleconference as an effective and economical means for instruction await more definitive assessment, the clarity of crosstalk communication achieved in these teleconferences, with as many as 100 or more persons, holds great promise for distant learning in higher education.

In some institutions, on-campus live sessions with the instructor are offered to distant learners as an option. Face-to-face sessions usually focus on orientation and reviews. These are beneficial to the students who elect to come to the campus and reinforcing for faculty who welcome the face-to-face communication. By and large, attendance at these sessions has not been up to expectation. Considering the fact that students choose the remote mode of learning to avoid scheduled meetings, the poor attendance on campus is understandable.

The convenience of studying at home and at their own pace prompts numerous persons to enroll in open learning courses. However, procrastination is an evil monster that hardly spares anyone, and knows no barrier in terms of sex, race, and economic conditions. Procrastination is a part of human nature. The sooner this phenomenon is accepted, the better the chance is that we will develop mechanisms to help distant learners to overcome this syndrome. Weekly broadcasts of radio or television programs pace the students to some extent. Some mechanisms which can be used to elicit active student participation are writing assignments, quizzes, and exercises.

The weakest link in open learning programs is the vehicle to monitor student involvement and progress. Attempts have been made, and continue to be made, to use human tutors (a tradition-bound practice!) for this purpose. Human capacity can only cope with a small number of students who perform along the same time line as the tutor. The "event paced" instructional model that characterizes on-campus classroom instruction is a poor substitute, philosophically and managerially, in open learning programs. Reliance on computers for monitoring student learning and prescribing for deficiencies is inevitable.

The Open University in Great Britain, which created a network of tutors, is currently introducing an interactive computer system for learners. As long as the numbers are reasonably small and a computer terminal is accessible, the remote student can be expected to use this system for learning without being frustrated. It is premature to predict what the Open University's experimentation with the in-

[8] Anandam, Kamala, and Fleckman, Bess. "Telephone Dialogue Intervention in Open Learning Instruction." *Journal of College Student Personnel* 18: 219-227; 1978.

[9] TELECOMS. "Hermes' visits British Columbia." *TELECOMS 2:1*; Winter, 1978.

[10] Ibid., p. 2.

[11] Ibid., p. 4.

[12] Ibid., p. 5.

teractive computer system will reveal. It is conceivable that, with the rapid progress in computer sophistication, the distant learners can interact with computer systems from their own homes. Meanwhile, computerized instructional feedback systems like CAMOL in the United Kingdom, CADE in Europe, and TIPS and RSVP in the United States offer computer-based systems for individualizing instruction. Of these, RSVP has been successfully used for the last seven years in media-based courses offered by Miami-Dade Community College's Open College.[13]

Delivery modes for instruction that render time and distance inconsequential for learning are laying the groundwork (not necessarily by intention) for what Ivan Illich calls "learning webs" in his provocative book *De-Schooling Society*.[14] Distant learners are getting together by telephone or in small groups to compare notes, to study, and at times, to grumble and groan about ill-conceived and poorly planned courses. This represents the peer group interaction which is a spin-off from distant learning programs. Peer group interactions are shown, by theory and research, to facilitate learning. Great Britain's Open University exploits this principle in its broadcasts by including some peer group discussions in the presence of an instructor.

What happens in the student initiated informal peer group discussions without an instructor? Some skeptics are quick to label the process a "pooling of ignorance." This might very well take place with some students. There is use and misuse of any tool or method. Peer group discussion is no exception. However, students' self-reports have revealed, time and again, that they discuss the course content with their peers and call their instructor for further clarification. This spontaneous assembling of distant learning students in peer clusters warrants greater scrutiny by educators for its appropriate place in instruction.

In planning for and promoting lifelong learning, Allen Tough's research is significant. Tough defined a learning project as a highly deliberate act with an intent to retain the knowledge or skill for at least two days. Under this definition, Tough found that the average person conducts 83 learning projects and spends about 800 hours per year toward learning. Based on his findings, Tough recommends that curricular activities should be changed toward self-development projects and that alternate systems for learning should be provided to increase the choices for students.[15] While Tough's recommendations are psychologically sound, it is not likely that they will be incorporated to any appreciable degree in tradition-bound, on-campus classes. On the other hand, planners for mass media instruction should take to heart ideas generated by scholars like Tough and Illich, and think of divergent ways to reach students, wherever they might be.

Considerations of economy, time, and money can unwittingly lead planners for distant learning to accept a linear model—sequential arrangement of units of information that has to be learned in that order and remembered for testing. The assessment of needs and the establishment of prerequisites for individual students as well as the provision of individualized instruction are virtually impossible in the context of term boundaries currently in operation and without the reliance on computers to handle the complexities of instructional management. RSVP (Response System with Variable Prescriptions), a computer system for individualizing instruction, which is in use at Miami-Dade Community College, Northern Virginia Community College, Lord Fairfax Community College, and the University of Hawaii, offers the computer capability to meet the needs of individual students as well as handle the managerial intricacies.

A number of prominent researchers and commentators on the American higher education scene have examined the RSVP system and have offered testimony to its potential for redesigning some of the traditional structures of higher education. As an illustration, Patricia K. Cross writes the following about the RSVP system:

> The Miami-Dade experience with the use of computers to manage individualization is

[13] Anandam, Kamala. "Annual Report of Open College." Miami: Miami-Dade Community College, October 1977. 56 pp. (Unpublished)

[14] Illich, Ivan. *De-Schooling Society*. New York: Harper & Row Publishers, 1970. 116 pp.

[15] Postsecondary Education Resources, Inc. "Self-Directed Learning." *The PER Special Reports* 1: 1-4 October 1977.

pulling the rug out from under the defense of group instruction and semesters on grounds of fiscal and administrative necessity—which is not necessarily to deny that group instruction may have its own contributions to make to some forms of student learning. But the fact is that it is no longer necessary for economic or administrative reasons to organize education into semester-long courses taught to groups of students. We now have the freedom and the obligation to reassess the usefulness of our organization of education for its contribution to student learning.[16]

Effectiveness of Communication

What does research show about the effectiveness of communication with distant learners? In the fifties and sixties, high interest led to comparative studies between instruction with and without television. By and large, the conclusion from the studies was that the "average student is likely to learn about as much from a TV class as from ordinary classroom methods, in some cases he will learn more and in some less, but the *overall verdict has been, no significant difference.*"[17] Chicago's TV College is well known for its pioneering leadership in firmly establishing a prominent role for television instruction. Its research, experimentally controlled and conducted by distinguished educators from across the country, clearly demonstrated that homeviewers tend to surpass the performance of their on-campus counterparts who are comparable in age and ability.[18]

In the seventies, comparing on-campus courses with television courses is no longer necessary. Students heretofore not reached by colleges or universities hail non-traditional instruction as long overdue.[19] Small wonder, student satisfaction is a consistent finding in research on television courses.[20] Students' acceptability is an undeniable ingredient in establishing television as a viable medium for instruction. The convenience of learning in their own homes is perhaps the underlying reason why students accept television courses quite readily. As an illustration, in a nationally conducted study, 56 percent of the students sampled claimed convenience as a highly motivating factor for their pursuit of college education.[21] While student enrollment is prompted by convenience, it is the quality of television courses resulting in personal enrichment that ensures lasting student satisfaction and continued utilization of similar courses.

The fact that students are genuinely pleased with their experience in television courses accounts for the research finding that "word of mouth" is often mentioned by students as their prime source of information about these courses.[22] Further, it was reported in "The Ascent of Man" study that students who did not complete the course continue to view the television programs.[23] As claimed in one report the students "remain unanimous in their belief that open-circuit television instruction is tightly organized and effectively paced, as contrasted with the often digressive and sometimes casual performance of classroom teachers."[24] Those who are not full-time college students and who tend to be older and employed are far more satisfied about open learning than the younger students who are enrolled full-time in

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[16]Cross, Patricia K. "What Would Happen If...?" A paper presented at the Conference of the League for Innovation in the Community College, Newport Beach, California, March 9, 1978.

[17]Schramm, Wilbur. "Learning from Instructional Television." *Review of Educational Research* 32: 156-167; April 1962.

[18]Willis, Benjamin C.; Masiko, Jr., Peter; and Erickson, Clifford G. *A Report of a Three Year Experiment by the Chicago City Junior College.* (Summary) Chicago: Chicago's TV College, July 1960. 22 pp.

[19]Cross, Patricia K. *Accent on Learning.* San Francisco: Jossey-Bass Inc., Publishers, 1976. 291 pp.

[20]Anandam, Kamala. Office of Special Services. "Telecourse Evaluation, 1974-1975. 8 pp. (Unpublished). Office of Institutional Research. "Student Reaction to Television Courses—Spring Semester, 1973-74." Costa Mesa: Coast Community College District, 1974. 101 pp. (Unpublished). 74." Costa Mesa: Coast Community College District, 1974. 101 pp. (Unpublished).

[21]Purdie, Leslie, and Icenogle, Darrell. "Classic Theatre: The Humanities in Drama. " Costa Mesa: Coast Community College District, December 1976. 145 pp. (Unpublished).

[22]Kelly, J. Terence, and Anandam, Kamala. "Report of Workshop for Faculty and Administrators of Florida Community Colleges Offering Television-Based Courses." Florida Community Colleges State Television Consortium, February 1976. 50 pp. (Unpublished).

[23]Hoachlander, Marjorie E. "*The Ascent of Man: A Multiple of Uses*?" (Summary) New York: Center for Advanced Study in Education of the City University of New York, May 1977. 28 pp.

[24]Zigerell, James, and Chausaw, Hyman. "*A Fifth Report.*" Chicago: Chicago's TV College, January 1974. 38 pp.

college.[27] More importantly, television courses have extended the services of institutions of higher learning to a new clientele, and contrary to common belief, have introduced that new clientele to the on-campus programs.[28] Therefore, faculty expressions of fear that television courses would deplete campus enrollment are not supported by recent trends. In fact, students who take television courses in the privacy and security of their own homes seem to acquire confidence to seek additional college experiences by enrolling in on-campus courses.

The quality of technical production of television series such as "The Ascent of Man" and "Classic Theatre" coupled with nation-wide broadcasts of the series at prime-time plays a significant role in popularizing television courses.[29] Furthermore, the enormous power of television to arouse emotions is an unquestionable asset in learning. It is difficult for educators to predict or control these visceral reactions. What can be predicted is that intense emotional responses do occur! The challenge to guide these affective energies to insure that thousands of people who watch these television programs can have meaningful learning experiences is no small task. Perhaps the best testimony to the foregoing statement is provided by the "Roots" television series. This series broadcast by ABC (American Broadcasting Corporation) is unparalleled in history by the 130 million individuals who watched the program.[30] No single program in American television annals ever attracted such an incredible number of viewers. The emotional reaction was unpredictable. Some rioted in the streets, while others soberly reflected on the meaning of their own heritage; many black Americans internalized their historical and ancestral immigration to their present existence.[31] In one community college, the emotional involvement and personal curiosity stimulated by the "Roots" television series became evident through the increased enrollment in the history course developed by Miami-Dade for national distribution.[32]

In reviewing the studies on instructional television, it is reported that television and classroom instruction that are similar in content are equally effective.[33] The unique capabilities of television as a medium of instruction in higher education are just beginning to emerge. Consequently, research evidence on its teaching effectiveness is not presently available. Nonetheless, anecdotal reports from students and faculty seem to indicate that television is both captivating and instructive.

Two truths can be stated without much hesitation: 1) Some must learn at a distance or not at all; 2) most succeed with the assistance of external motivators or not at all. Television has unquestionable potential to serve as a positive force in the lives of individuals whose circumstances reflect one or both of the above statements. To illustrate, television series that are broadcast on a weekly schedule act as a pacer for the solitary learner.[34] This is in contrast to correspondence courses, which are void of predictable schedule of stimuli to energize the learner. Courses accompanied by scheduled television broadcasts enjoy higher course completion rates than correspondence courses.[35]

Instruction via radio, like television, is as effective as classroom instruction, if not better, particularly when interspersed with appropriate print materials.[36] Purdue University's experiment with radio broadcasts of class lectures to several off-campus students showed that these students scored better than on-campus students in a comprehensive examination.[37] Research coming out of Virginia Com-

[27] Hartnett, Rodney T., and others. *The British Open University in the United States*. Princeton: Educational Testing Service, 1974. 8 pp.

[28] Zigerell, James, and Chausaw, Hyman. op. cit.

[29] Kelly, J. Terence, and Anandam, Kamala. "Nationwide Prime-time Television in Higher Education." *International Journal of Instructional Media* 5:219-228; 1978.

[30] "Why 'ROOTS' Hit Home." *Time*, February 14, 1977, pp. 69-71.

[31] Fraser, Gerald. "Research Finds that Blacks, Whites Had Faulty Concepts about 'ROOTS'." *The Miami News*, June 10, 1977, p. 5C.

[32] Anandam, Kamala. op. cit.

[33] Jamison, Dean; Suppes, Patrick; and Wells, Stuart. "The Effectiveness of Alternative Instructional Media: A Survey." *Review of Educational Research* 44: 1-68; Winter 1974.

[34] Brown, Lawrence A. "Learner Responses to The Use of Television in UMA Courses." Lincoln: University of Mid-America, July 1975. 60 pp. (Unpublished).

[35] Lipson, Joseph. "Technology and Adult Education: A Report on the University of Mid-America Experiment." *The Journal of Technological Horizons in Education* 4: 36-38; September/October 1977.

[36] Jamison, Dean; Suppes, Patrick; and Wells, Stuart. op. cit.

[37] Robertson, E. James. op. cit.

[38] Ibid.

monwealth University also endorses the effectiveness of radio programs in motivating and facilitating learning.[36]

An element of surprise is observed in the faculty when they realize the extensiveness of curricular planning entailed in offering a course in the remote mode. Amazement grows greater when they learn that the telephone, phone-in radio programs, and answering telephone service are available and, in fact, are used for a two-way communication with the distant learners. The realization that computer systems like RSVP can aid in communication as well as individualizing instruction completes this process of enlightenment. Initially, the lack of face-to-face contacts with the students causes faculty apprehension. As they have increased their involvement and familiarity with mediated instruction and support systems, faculty proclaim that lack of face-to-face interactions is not a deterrent for students to learn. As one teacher stated, "If you're taking a course by television, you're gaining more than you lose from lack of contact with an instructor."[37]

Despite the fact that media-based courses which carry instruction into homes are popular, especially for those who complete the learning experience, attrition rates are not exemplary. While the range is anywhere from 30 to 95 percent, the attrition rates in several open learning courses are higher than in on-campus classes. This should not be alarming considering the open-door policy for admission in many institutions and the fact that students choose remote modes for learning without realizing the extent of their capability for independent study. Some techniques are available to help the students to complete the course. For instance, telephone intervention by way of maintaining a dialogue with the distant learners has been effective in increasing course completions.[38] Also, correlational studies conducted at Miami-Dade Community College have repeatedly shown that students who participate in the RSVP system of instruction (approximately two-thirds of the enrollees do, some of whom do so by constant reminders) are more likely to complete the course and make better grades.[39] The point is that by prescribed programs of intervention, attrition can be reduced.

Open learning programs represent "access to education" in its truest sense. The media utilized in these programs touch the masses. Therefore, their impact far exceeds what would typically occur within the confines of a classroom. The success of these media-based programs are determined by educators on the basis of enrollment figures, course completion rates, and grade distributions. These time-honored criteria are universally recognized and accepted as an adequate basis for establishing academic credibility. Unfortunately, evaluation which occurs within these parameters precludes an assessment of some highly desirable societal results. For example, do we know: How many manage their finances better? How many keep their automobiles running? How many avoid environmental pollution? How many become effective parents? The "not so easily measurable" impact on attitudes and values of individuals and the community is too valuable to be ignored. To conduct research in these areas is almost imperative, however hazardous the task might be, to elevate open learning programs from the obvious to the subtle qualities of their impact.

Emerging Technology

Projections into the future are as fascinating as they are frightening. Many of our dreams and science fiction of a decade ago have turned real. Where will our dreams and science fiction of today lead us? What is regarded as revolutionary today is likely to be outdated tomorrow. The rate of change throughout the world continues to cause some degree of "future shock" in all of us.[40] The uncertainty of new applications of communications technology stirs up anxiety and insecurity in educators. The implications, while not clear, are threatening.

No one can perceive all the forms of emerging technology. However, there are sufficient indications that, in the next ten to 20 years, we'll be living in a different kind of a world.

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[37] Purdie, Leslie, and Icenogle, Darrell, op. cit.

[38] Real, James. "Coast Community College – The Learning Society, California Style." *Change* 10: 22-27, 62; March, 1978.

[39] Anandam, Kamala, op. cit.

[40] Kelly, J. Terence. "Concepts of Change" in McCabe, Robert H., and Mines, R. F. (Eds.) *Man and Environment Volume I*. Englewood Cliffs: Prentice-Hall, Inc., 1972. pp. 74-96.

This is what has been referred to by the Carnegie Commission as the "fourth" revolution!

The advancement of computer technology will be the single most powerful force in radically changing lifestyles. The scientific breakthrough that will be responsible for such an impact is already here in the form of chip technology. There is clear indication that this electronic invention will run through every thread of our social fabric.[41] The chip will make it possible for the extraordinary storage, memory, and retrieval capacities of enormous hardware configurations of today to be reduced to a size which can be comfortably transported from place to place without any appreciable loss of computing capability.

One of the most startling, if not stunning, adaptations of computer technology has been the introduction of a computer that is able to scan a printed page and convey the message orally.[42] The service this machine can render to the blind is incalculable in increasing their opportunities to learn. Undoubtedly, it has an exhilarating effect in lifting their spirits. With various modifications, computers can accommodate voice entry and storage, visual displays of ideas, all of which can improve communication among the handicapped.[43] With some confidence, it can be envisioned that in the not too distant future, homes can be easily connected to sophisticated computer networks. The implications for open learning programs are quite apparent.

Interinstitutional cooperation, where there is a pooling of resources, can insure higher quality distant learning programs that can be extended to a larger clientele.[44] When networks like the Indiana Higher Education Communication Technology System (IHETS) become popular, instructional programs within a country will include sophisticated telecommunication systems that include television, radio, telephone, and computer communications. Cable and satellite facilities will make time and distance immaterial in the teaching-learning process.[45] Participatory TV such as Qube that is being used on an experimental basis in Columbus, Ohio, will permit the students to express their reactions and instantaneously see on the screen statistics about others watching the program and their reactions.[46] The investigations of brain-behavioral scientists permit an unbiased assessment of the interest value of any television program. This is accomplished by providing television sets with brain monitoring equipment to record the brain's attention activities.[47]

Combining the visual impact of television, the appeal of stereo sound, and the capabilities of computers (storage, retrieval, and random access), the videodisc is likely to revolutionize the delivery of instructional programs for distant learners. The videodisc is already within the reach of the educator and the consumer. Imagine students turning on the television sets in a place of their choice, at a time convenient to them and progressing through programmed instruction![48]

What do all these mean for institutions of higher education? A mind-boggling challenge that most of us might wish would disappear before we have to confront it. The stark reality is that the challenge is here to stay. The emerging forms of technology will inevitably change educators' thinking and behavior. Those educators who have a vision beyond the learning environment of today, a receptive attitude toward change, and a pioneering spirit to persevere will have the privilege of shaping and controlling the technological innovations in education for inspirational and imaginative forms of learning. Conversely, fear, insecurity and anxiety will prevail for those who choose to dismiss the waves of the future.

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[41] "The Age of Miracle Chips." *Time*, February 20, 1978, pp. 44-59.

[42] Watson, Paul G. "Utilization of the Computer with Deaf Learners." *Educational Technology* 18: 47-48; April 1978.

[43] Ibid.

[44] Evans, David L., and Gollatscheck, James F. "Reaching Communities Via Television & Radio: The Florida Model." *Community and Junior College Journal* 46: 6-8; March 1976.

[45] Burlingame, Dwight F., and Simmons, Charles E.P. "Utilizing Technological Developments for the Improvement of Teaching in Higher Education." *International Journal of Instructional Media* 5: 197-203; 1978.

[46] Brown, Les. "Participatory TV." *The Miami News*, April 24, 1978, p 5C.

[47] "TV Brain Waves and Human Behavior." *Science News* 113: 215; April 1978.

[48] Gray, Robert A. "Videodiscs: Pros and Cons." *International Journal of Instructional Media* 5: 157-159; 1978.

Effective Community Promotion of Telecourses

By Chip Harris and Dee Brock

In an economy of rising discretionary income, intense competition, and rapid technological change, no company can expect to enjoy a permanent place in the hearts and minds of American buyers on the basis of its current product line. American business history includes many examples of established companies, products, and brands that have passed into oblivion. Change is inevitable and effective management is management that plans for change. Most companies see their survival as resting on a commitment to continual product innovation.[1]

The quotation above is not meant to suggest that institutions of higher learning are companies or businesses. The only meaningful goal of any corporation is profit. Lacking this clear, central, and measurable goal tends to make the management of educational institutions more complex.[2] Despite this basic difference of purpose, the last 20 years in educational administration have been marked by the adaptation of management practices, strategies, and techniques often developed in the commercial sector. Examples of adaptation are numerous. Areas such as accounting methods, financial management, data retrieval systems, management-by-objective, purchasing policies, personnel procedures, and long-range planning come quickly to mind.

More recently, the role of marketing in higher education is receiving increasing attention in academic journals, meetings, and seminars. Bibliographies on this subject now run several pages in length. There is no need to detail the many diverse advantages which have been suggested for a greater institutional marketing resource by such distinguished academicians as Philip Kotler of Northwestern University. The mere idea that there is a proper and legitimate role for marketing within educational administration remains controversial or suspect in the minds of many educators.

Why? Marketing is often confused with selling, even in business management. Peter Drucker is often quoted on this subject and it is worthwhile to note his distinction between selling and marketing.

> When managers speak of marketing, they usually mean the organized performance of all *selling* functions. This is still selling. It still starts out with "our products." It still looks for "our market." True marketing starts out the way Sears starts out—with the customer, his demographics, his realities, his needs, his values. It does not ask, "What do we want to sell?" It asks, "What does the customer want to buy?" It does not say, "This is what our product or service does." It says, "These are the satisfactions the customer looks for, values, and needs."

Indeed, selling and marketing are anti-

Here's a scene from a children's literature series produced and broadcast by Milwaukee Area Technical College's WMVS.

Bergen Community College in New Jersey produces telecourses for CBS-TV's "Summer Semester" and "Sunrise Semester." Philip C. Dolce, director for the Center for Public Media at Bergen, is shown on a set for "Transformation of American Society" with writer Grace Hechinger and (right) the late Margaret Mead, anthropologist.

[1]Kotler, Philip. *Marketing Decision Making*, Holt, Rinehart and Winston, New York, 1971, p. 519.

[2]Peter F. Drucker feels there is only one basic difference between businesses and other public service institutions.

> Drucker, Peter F. *Management*, Harper & Row, Publishers, New York, 1974, p. 141:
>
> Businesses (other than monopolies) are paid for satisfying the customer. They are paid only when they produce what the customer wants and what he is willing to exchange his purchasing power for. Satisfaction of the customer is, therefore, the basis for assuring performance and results in a business.
>
> Service institutions, by contrast, are typically paid out of a budget allocation. This means that they are not paid for what taxpayer and customer mean by results and performance. Their revenues are allocated from a general revenue stream which is not tied to what they are doing but obtained by tax, levy, or tribute.

thetical rather than synonymous or even complementary.

> There will always, one can assume, be need for some selling. But the aim of marketing is to make selling superfluous. The aim of marketing is to know and understand the customer so well that the product or service fits him and sells itself.[3]

It is important to distinguish marketing from selling. The most successful community promotion for telecourses, as demonstrated in the case study on Dallas County Community College which concludes this chapter, is developed from a marketing orientation, not a selling orientation.

There is also the need to *define* marketing management.

> Marketing management is the analysis, planning, implementation, and control of programs designed to bring about desired exchanges with target audiences for the purpose of personal or mutual gain. It relies heavily on the adaptation and coordination of product price, promotion, and place for achieving effective response.[4]

Marketing Telecourses

With the above definition and the distinction between marketing and selling, it is interesting to examine the lead-ins to recent articles appearing in two national publications: "Hard Sell for Higher Learning" (*Time*, October 2, 1978), "'Telecourse' Boom Hits Community Colleges" (*The Chronicle of Higher Education*, April 17, 1978). The article appearing in *Time* discusses, among many things, attempts at various institutions to re-label courses to make them more attractive to students. Thus, at Columbia University, English History: 1760 to the Present, became Political Culture of Modern Britain. The University of Montana named a course on Mexican history Cow Chips and Revolution.[5] In the eighties, with declining numbers of 18-year-olds, we are likely to see many additional such changes by educational institutions which might well draw the wrath of consumer groups if done by commercial entities. This is essentially a selling orientation.

The Chronicle of Higher Education article discussed the growing number of institutions, particularly community colleges, now utilizing telecourses. The author of the article also referenced briefly the demographic differences between telecourse students and on-campus students.[6] In so doing, he might well have been unaware that telecourse utilization by institutions represents a marketing-oriented response to the changing needs of adult learners and declining enrollments. Community colleges in America have a history of responding quickly to changing community needs. Utilization of telecourses is but one example. Perhaps this is one reason when asked in 1974 why a community college district should utilize broadcast television, Norman E. Watson, chancellor of Coast Community College District, replied, "How can a 20th century educational institution possibly ignore broadcast television?"[7]

The ultimate success any institution has enjoyed in meeting the educational needs of a community with telecourses cannot be separated from the capacity to effectively inform the community of the benefits found in telecourses. Without a commitment of promotional resources, some institutions have experienced financially unacceptable telecourse enrollments. The commitment to promotion need not be one of large numbers of dollars. Course producers often supply slick and ready art for brochures, press releases, television spot announcements, slides, photographs, and scripts for audio spots as telecourse components included in the price of leasing a course. Rather than more dollars, success in promotion can often be achieved by effective and early planning, total involvement of public information personnel and faculty, and strong coordination between the college and television station. As outlined by Sally Beaty in an earlier chapter, there are significant savings with all costs, including promotion, through a consortium arrangement.

An excellent and practical booklet on "Attracting the Television Student" has been prepared by Richard V. Simon, director of community relations and public information at

[3] Ibid., p. 64.

[4] Kotler, Philip. *Marketing Management: Analysis, Planning and Control*. 2nd ed., Prentice-Hall, Englewood Cliffs, New Jersey, 1972, p. 12.

[5] "Hard Sell for Higher Learning," *Time*, October 2, 1978, p. 80.

[6] Middleton, Lorenzo. "'Telecourse' Boom Hits Community Colleges," *The Chronicle of Higher Education*, April 17, 1978.

[7] Watson, Norman E. "Comment," *Forum Fifty*, Volume 2, Number 3, March 1974.

Coast Community College District. It is designed for use with public information personnel and is available free to all institutions using telecourses.

Promotion Is Vital

The experience of those institutions using telecourses for many years includes the knowledge that effective promotion is vital to the success of telecourse offerings. Dr. Watson best summarized this experience:

> Not too many years ago, the most vexing problem facing colleges and universities that wanted to offer opportunities for students to take telecourses was the unavailability of quality courses. This is no longer the case. Due to increased activity during the 70's in a number of institutions throughout the country, and because of a number of cooperative arrangements which have brought academic expertise and production ability together, we are beginning to see a modest supply of quality programs appearing on the market on a rather regular basis.
>
> The problems colleges and universities face now are (1) finding out what the new programs are, and where they can be obtained, and (2) developing the appropriate procedures and arrangements for enrolling students.
>
> In attempting to find a solution to the first problem—developing an information base on resource availability—a number of community colleges throughout the United States are pooling their efforts in cooperation with the American Association of Community and Junior Colleges to develop a task force on mass media.
>
> A solution to the second problem is equally critical. Many institutions which have initiated college courses for credit by television have been disappointed by the enrollment. In most cases this has been due to treating the television course as simply another course for credit and listing it in a schedule of classes along with all other courses.
>
> Because telecourses are unique, new, and have a different appeal, their handling requires at least a modicum of tender loving care, as well as some special treatment.[1]

The experience at Dallas County Community College illustrates well the special treatment to which Dr. Watson refers. Its experience clearly demonstrates the overall importance in promoting telecourses as part of a larger marketing plan.

The Dallas Experience

Dallas County Community College District is one of the more successful users of television as an instructional medium. From the perspectives of cost-effectiveness; numbers of students served; support from on-campus faculty, administrators, and Board of Trustees; student success; academic credibility; and instructional effectiveness, the DCCCD ranks among the top college users of telecourses for college credit. Part of that success is the result of a philosophy of marketing which transcends popular conceptions.

Many educators still regard "marketing" as a dirty word, and the idea of selling education as a crass concept. Those who accept the necessity often conceive of marketing in terms of advertising—newspaper displays, radio and television commercials, and direct mail appeals. Certainly, these strategies are a major part of the DCCCD telecourse marketing effort. However, DCCCD takes a much broader view of marketing and considers informing and serving the total service area as an integral, continual part of an overall plan for using television in an instructional system.

In the first years of offering telecourses, the marketing concept was unformed and the process was fragmentary. Because 1972-1974 was a period of great enrollment growth and because our first offering was in American government, then and now the highest enrollment course in the curriculum, a marketing plan hardly seemed necessary. Television attracted students because on-campus sections filled. The student barred from on-campus sections could wait or take a telecourse. When you're the only available game in town, you're bound to attract players.

The year 1974 was a decisive one. An Instructional Television Center was established to produce and help implement telecourses. Telecourse offerings were expanded. Another new college was opened, bringing the district total to four. Planning for three additional colleges began. Slowly, the ITV Center recognized the

[1]Watson, Norman E. "Zooming In," *Forum Fifty*, Volume 5, Number 7, July, 1977.

need for something more than a few newspaper ads before each registration period. It was more than a year before the center conceived a total marketing concept but the concept is now firmly established and dynamically growing as a part of the center's efforts to serve district goals.

Basically, marketing telecourses is part of the educational process—for the students enrolled, for all of the Dallas County community, and for the faculty and staff of DCCCD. Although the traditional principles of marketing prevail, perhaps the governing concept is that of positioning. The center has carefully considered its place and role in the overall DCCCD goals and marketing efforts are aimed at developing that position to the fullest potential.

What is the position of telecourses in DCCCD? First, telecourses provide an alternative mode of instruction for courses seen as useful or necessary parts of the district curriculum. Though one useful function of such an alternative is to provide access to instruction when on-campus sections are full, the more consistent function is to offer an alternative for students who cannot or will not take courses within the traditional college time frame. Whether their difficulties are home or job responsibilities, transportation arrangements, psychological fears about returning to school, health problems, or other personal concerns, telecourses serve those who need a distant learning mode.

Telecourses serve as a bridge to entry or reentry into the college mainstream. For some students, telecourses share with on-campus classes in meeting the students' educational requirements. However, telecourses are not confined to broadcast delivery. Since they are complete learning systems, they are used successfully via video-cassette as self-paced courses on campus and elsewhere. Further, individual lessons and units make excellent audiovisual supports for traditional on-campus courses.

How, then, do we work to achieve our position? Research over several semesters demonstrates that the best marketing tool we have is the satisfied student. More enrolled students report learning about telecourses from friends and family than from any other source. Thus, great care goes into our plans for interacting with students. Obviously, the foremost requirement is a credible, effective instructional product. But even though the course is first, it is certainly not enough by itself. The procedures by which the course becomes a fact in the students' lives are equally important. Because telecourse students are "at home," distant students—each learning alone, as a rule—the procedures must be even more carefully designed for smoothness of operation and personal concern than those of the on-campus programs with their built-in, face-to-face interaction.

Among the services DCCCD provides to satisfy students are (1) comprehensive telecourse information prior to registration; (2) easy access to telecourse personnel via telephone; (3) an informative orientation to successful telecourse instruction; (4) regular communication via newsletter; (5) worthwhile on-campus meetings (though required on-campus meetings are kept to a minimum for open circuit broadcast students, optional on-campus meetings lend support to those who need it); (6) telephone calls to students to inquire about their progress and concerns; (7) prompt response from instructors about grades, tests, and assignments; (8) clear-cut procedures for all phases of the course; and (9) optional mail-in or on-campus registration.

In addition, each telecourse student is enrolled as a bona fide member of the student body of one DCCCD college and as such is entitled to full participation in and use of campus activities, services, and facilities. Although we inform enrolled students about the next semester's offerings, it is generally agreed that the overall course design and implementation, both permeated with a genuine concern to make courses smooth, satisfying, and successful, are the more important marketing strategies.

The ITV Center handles central administrative duties, but much of the implementation of courses and most student registration functions are handled on campus. Thus, it is essential that faculty, counselors, support staff, and administrators are familiar with and supportive of instructional television as a college credit delivery system. The experiences of other colleges clearly show that faculty animosity can possibly defeat a program and almost certainly damage it. Consequently, a part of our marketing strategy involves "wooing" the on-campus personnel. We attempt to inform them about our position within the district goals and to demonstrate that ITV efforts and campus efforts are mutually supportive.

Informing Campus Personnel

Earning and maintaining support from DCCCD personnel is a continuous process and includes, among other things, the participation of the seven campuses in virtually every stage of decision-making regarding the selection, development, and implementation of telecourses. Approval of instructional content of telecourses, whether leased or DCCCD-produced, is the responsibility of the faculty, as are the design and content of supportive print materials. Development of self-paced, individualized offerings based on telecourses and use of telecourse materials in classroom settings is encouraged and supported.

A conscientious, though far from perfected, information program is an on-going and growing project. The most important aspect is the publication of a district-wide newsletter called *Open Circuit*, which informs all personnel of what the ITV Center is doing, what the on-campus telecourse staffs are doing, what our students are saying, what our research is demonstrating. In addition, periodically, various members of the ITV staff join discussion sessions with on-campus personnel—division faculties, counselors, admission staffs—to provide information and answer questions. Since faculty are often concerned about academic credibility and instructional effectiveness, two short video tapes—one demonstrating the components of a complete video instructional system and the other addressing the ways academic credibility is insured—have been prepared for campus use.

Another major faculty concern is that telecourses might replace on-campus instruction and teaching positions. As a matter of fact, DCCCD research has shown faculty that telecourses have maintained a fairly constant 20-30 percent share of the total DCCCD enrollment in each course offered both on-campus and via television, with a leveling off at approximately 23 percent in recent semesters. There is no evidence to indicate that any on-campus positions have been eliminated because of telecourse competition, either in Dallas or elsewhere. In fact, data indicate that telecourses are a recruiting tool for on-campus programs. Circulating research documents and *The First Six Years*, a history of telecourses in DCCCD, helps keep the facts before on-campus personnel.

Mass Media Techniques

With the foundation for successful telecourse promotion in the hands of the faculty and students, the Instructional Television Center utilizes a variety of mass media techniques to complete the marketing effort. Over the years, many approaches have been tried; current marketing plans represent those activities which have proven to be most effective for Dallas.

The mass media campaign incorporates newspaper and magazine advertising, direct mail, publicity efforts, and air time on radio and television. All print materials are designed to complement one another by carrying a similar graphic image, including course logos, typestyles, and catch phrases. Mail-in registration forms are also included on all printed matter to simplify the enrollment process for the prospective students. Radio and television spots carry similar messages to reinforce the ads and mailers.

A major direct mail campaign is used prior to each registration period. A self-mailer brochure is sent to some 100,000 to 200,000 households in zip code areas selected as target markets. In addition to the mail-in registration form, this brochure includes other vital information, such as the broadcast schedule for each course, course titles, credit hours, utility (required or elective), and transferability, costs, and the ITV telephone number so that students who have questions about telecourses can talk to someone knowledgeable about the operation. The overall message of each print marketing piece is a reinforcement of the telecourse position. Slogans and copy stress convenience for students of taking courses at home and at several different times of the day and week and the fact that the telecourses are real, credit-bearing college courses leading to degrees or certificates of achievement.

Previous campaigns have been built around such slogans as "Put a little class in your living room" and "Some of the best TV this fall (or spring or summer) is worth college credit to you." All direct responses to this mailing, whether telephone requests for additional information or actual registrations, are catalogued to determine which zip code areas should remain target markets.

Timed to coincide with the thrust of the major mailing are advertisements in the major

metropolitan newspapers, suburban newspapers, and *TV Guide*. The ads repeat the theme of the mail campaign and include registration forms as well as specific information about the courses. Again, all responses are catalogued to provide data for on-going study.

The use of radio and television for telecourse publicity and advertising is currently limited to public service time. DCCCD has, in the past, purchased air time on local television, but the documented response did not justify the large expense involved. However, since DCCCD is a non-profit organization, local radio and television stations are willing to devote public service time to present professionally-produced telecourse spots. Last year, DCCCD produced a series of television spots featuring "testimonials" by representative telecourse student types, such as a traveling salesman, a young man with a broken leg, a busy woman executive, a housewife with small children, an over-60 person. All of these types of persons have somewhat different reasons for taking telecourses, but the overall message is that telecourses serve student needs. Winners of regional and national awards, these public service announcements have been very effective in generating community response.

The submission of story ideas and prepared news articles to area news media is also a valuable element in the promotion campaign. While limited financial resources restrict the duration of the various advertising approaches, the use of publicity is a viable tool throughout the year. The two major metropolitan newspapers in Dallas County have cooperated with ITV on the development of numerous feature stories about the non-traditional telecourse student. The smaller suburban newspapers, of which there are many in Dallas, are generally quite appreciative of news and feature stories prepared for them by ITV staff. An additional source of publicity for telecourses is the student newspaper on each of the DCCCD campuses.

Though ITV never attempts to recruit students from the existing on-campus student body, the value of informing all students about telecourses is not overlooked. In fact, a major supplement to ITV advertising is recognition and promotion of telecourses through the regular public information activities of each DCCCD college. When they advertise their coming semesters and print their class schedules, TV courses are naturally included since each telecourse is a part of each college's curriculum.

Additional Efforts

All of the above activities are considered standard in the current ITV promotional effort. Additional techniques are implemented when special circumstances warrant them. For example, when DCCCD offered a course in religions of the world ("The Long Search"), a large potential student body existed in church education and other study groups throughout the community. Citing the highly-acclaimed instructional quality of the series, ITV Center prepared special flyers detailing this single course. These were mailed to discussion group leaders in churches, schools, parent-teacher organizations, and service groups. In addition, as a public service, the ITV Center in cooperation with the community service divisions of the district colleges conducted summer seminars to train group leaders to work with the course whether or not the members of their groups wanted to take the course for credit. The result was that 200 students enrolled for credit in more than 70 study groups across the county.

Future plans for the ITV Center naturally call for improvement in design and execution of current strategies. For example, we hope to achieve even better communication links with campus personnel, particularly those staff members who are most likely to be a student's first contact with the institution by phone or in person, such as the staff of the registrar's office. And our efforts to make the telecourses satisfying and successful educational experiences for students are a matter of constant concern for faculty and administrators alike. In addition, we plan to produce several series of public service announcements: another set of generic television spots, a series of radio spots, and a series of course-related public service announcements for radio and television.

New Strategies

We are also devising new strategies. For instance, working through the several colleges, we hope to see telecourses on videocassette provide college credit education via closed circuit or VTR unit on site at Dallas County businesses, in jails and prisons, and in hospitals. Plans are also underway for DCCCD telecourses to be used in Dallas County high schools to allow seniors to enroll concurrently

in their public schools and in college.

Like most others involved in educational marketing, the DCCCD ITV Center has more ideas than it has staff, time, and money to execute them. However, our overall marketing concept is firmly established, and our position and strategies have won for telecourses their appropriate place in the educational system of the DCCCD.

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